

AD-A082 470

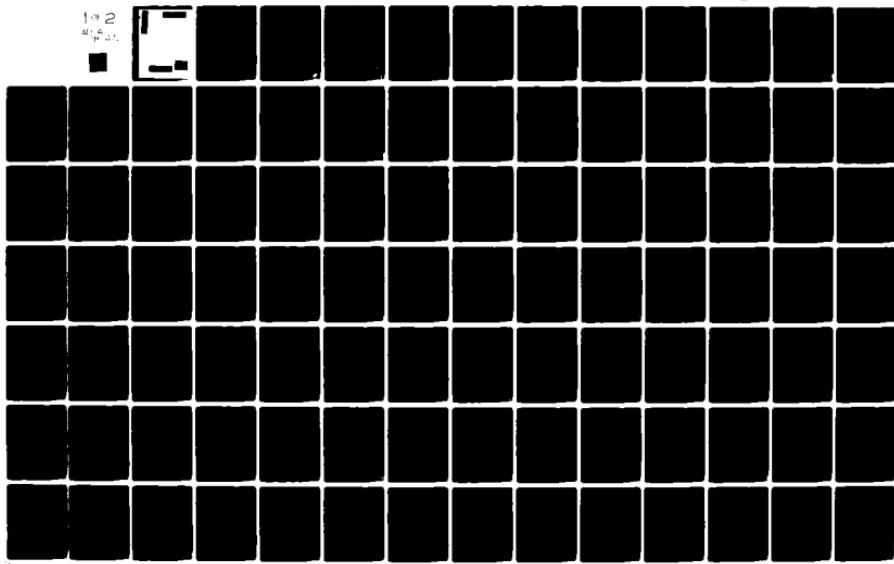
NATIONAL REFERRAL CENTER WASHINGTON DC  
DIRECTORY OF FEDERALLY SUPPORTED INFORMATION ANALYSIS CENTERS, --ETC(U)  
1979

F/6 5/2

NL

UNCLASSIFIED

102  
470-2  
APR 21 1979



**THE NATIONAL REFERRAL CENTER** in the Library of Congress is a free referral service that directs those who have questions concerning any subject to organizations that can provide answers.

The referral service uses a subject-indexed, computerized file of 12,000 organizations identified as "information resources" by the center. A description of each resource includes its special fields of interest and the types of information service it is willing to provide. The National Referral Center file, which is maintained by professional analysts, is used primarily by the center's referral specialists. It also is accessible to readers at the Library of Congress through computer terminals located in various reading rooms and to many federal agencies nationwide through the RECON computer network operated by the Department of Energy.

In answer to requests for assistance, the center's referral specialists provide names, addresses, and telephone numbers of appropriate information resources and give a brief description of what to expect from each. To get in touch with the center, write or call:

National Referral Center  
Library of Congress  
Washington, D.C. 20540  
Tel: (202) 287-5670 (for referral service)  
287-5680 (to register new resources)

**OTHER NATIONAL REFERRAL CENTER DIRECTORIES**, based on broad selections from its data base, have been published by the Library of Congress under the general title *A Directory of Information Resources in the United States*. The most recent of these were subtitled *Federal Government, with a Supplement of Government-Sponsored Information Analysis Centers* (1974), *Social Sciences* (1973), *Biological Sciences* (1972), and *Physical Sciences, Engineering* (1971). A volume subtitled *Geosciences and Oceanography* was in preparation at the time this directory went to press. Directories in this series are sold through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Staffan Rosenberg, ext. 7-5633  
John F. Price, Chief, Sci  
Copy to xxxxxxxx Director for General Reference  
March 25, 1980

LIBRARY OF CONGRESS PUBLICATIONS

Directory of Federally Supported Information

Analysis Centers. 4th edition. 1979. (ix, 37 p.)

Compiled in the Science and Technology Division by the National Referral Center, this is the latest edition of a directory first issued in 1968 by the since defunct Committee on Scientific and Technical Information (COSATI) of the Federal Council for Science and Technology. The 198 entries in the directory describe centers operating within the government, or outside but with federal support, that have the competence to sift, weigh, analyze, and synthesize information (as distinct from "merely collecting, cataloging, abstracting, and uncritically disseminating documents.") The directory has four indexes: subject, geographic, personal names, and sponsors and other organizations.

For sale by the Superintendent of Documents, U.S.

Government Printing Office, Washington, D.C. 20402  
for \$4.00 (Stock No. 030-000-00115-0).

CR:3r

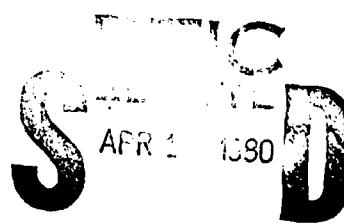
# **Directory of Federally Supported Information Analysis Centers,**

1979.

*Fourth Edition.*

Compiled by the National Referral Center

Library of Congress Washington 1979



**DISTRIBUTION STATEMENT A**  
Approved for public release  
Distribution Unlimited

**Library of Congress Cataloging in Publication Data**

United States. Library of Congress. National Referral Center.  
Directory of federally supported information analysis centers.

Issued in 1968 by the U.S. Federal Council for Science and Technology, Committee on Scientific and Technical Information, and in 1970 by the center under its earlier name, National Referral Center for Science and Technology.

1. Science—Information services—United States—Directories.
2. Technology—Information services—United States—Directories.
1. United States. Federal Council for Science and Technology. Committee on Scientific and Technical Information. Directory of federally supported information analysis centers. II. United States. Library of Congress. National Referral Center for Science and Technology. Directory of federally supported information analysis centers. III. Title. [DNLM:  
1. Information retrieval systems—Directories. Z699 L698d]

Q223.5.U54 1979 507 74-9567  
ISBN O-8444-0128-5

## Preface

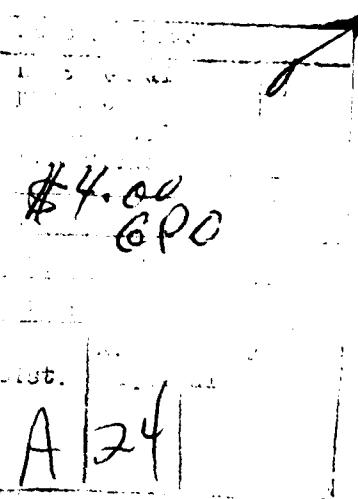
This is the fourth edition of a directory first published in 1968 by the Committee on Scientific and Technical Information (COSATI) of the Federal Council for Science and Technology. The initial impetus for the directory came from COSATI Panel 6 on Information Analysis and Data Centers, whose members felt a directory would not only be useful but would also serve to further the concept of information analysis centers that had been a keystone among the recommendations of the seminal Weinberg report.

That concept, briefly stated, is that the "information explosion" can be dealt with more efficiently by having information sifted, weighed, analyzed, and synthesized by centers with the subject competence to do so than by merely collecting, cataloging, abstracting, uncritically disseminating documents.

The second edition, published in January 1970 by COSATI, was compiled by the National Referral Center (NRC) at the request of COSATI Panel 6, whose members played an active role in deciding which centers to list. The third edition was published in 1974 by the Library of Congress, COSATI having been abolished. That edition was again compiled by the NRC, this time in consultation with an interagency ad hoc group on information analysis centers made up of former Panel 6 members.

The present edition, which was compiled without formal consultation, consists mainly of updated versions of entries that appeared in prior editions; in accordance with NRC's practice, each entry was submitted to the center described therein for review.

\*United States. President's Science Advisory Committee. *Science, Government, and Information: The Responsibilities of the Technical Community and the Government in the Transfer of Information; a Report*. Washington, 1963. 52 p. For sale by the Superintendent of Documents, U.S. Government Printing Office.



## Contents

Preface .....	iii
Directory.....	1
1. Advisory Center on Toxicology .....	1
2. Aerospace Structures Information and Analysis Center (ASIAC).....	1
4. Alloy Data Center .....	2
4. Argonne Code Center.....	3
5. Atomic Energy Levels Data Center .....	4
6. Atomic Transition Probabilities Data Center .....	4
7. Berkeley Particle Data Group.....	5
8. Biomedical Computing Technology Information Center.....	6
9. Brain Information Service .....	6
10. Breeder Reactor Fuel Systems Information Center .....	7
11. Bureau of Drugs—Division of Poison Control .....	7
12. Bureau of Mines—Associate Director, Mineral and Materials Supply/Demand Analysis ..	8
13. Bureau of Mines—Alaska Field Operations Center.....	9
14. Bureau of Mines—Eastern Field Operations Center .....	9
15. Bureau of Mines—Western Field Operations Center.....	10
16. Center for Climatic and Environmental Assessment (CCEA) .....	10
17. Center for Experiment Design and Data Analysis .....	11
18. Center for Information on Internal Dosimetry of Radiopharmaceuticals .....	12
19. Chemical Kinetics Information Center .....	12
20. Chemical Propulsion Information Agency (CPIA) .....	13

21. Chemical Thermodynamics Data Center . . . . .	14
22. Cold Regions Science and Technology Information Analysis Center . . . . .	14
23. Controlled Fusion Atomic Data Center . . . . .	15
24. Cryogenic Data Center . . . . .	15
25. Crystal Data Center . . . . .	16
26. Data Center for Ion Energetics . . . . .	17
27. Data Center on Atomic Line Shapes and Shifts . . . . .	17
28. Data Collection and Processing Group . . . . .	18
29. Diffusion in Metals Data Center . . . . .	18
30. DOD Nuclear Information and Analysis Center (DASIAC) . . . . .	19
31. Earth Resources Observation System (EROS) Data Center . . . . .	20
32. Ecological Sciences Information Center . . . . .	20
33. Electrolyte Data Center . . . . .	21
34. Electronic Properties Information Center (EPIC) . . . . .	22
35. Environmental Information Division . . . . .	22
36. Environmental Mutagen Information Center . . . . .	23
37. ERIC Clearinghouse on Adult, Career and Vocational Education . . . . .	23
38. ERIC Clearinghouse on Counseling and Personnel Services . . . . .	24
39. ERIC Clearinghouse on Early Childhood Education . . . . .	25
40. ERIC Clearinghouse on Educational Management . . . . .	26
41. ERIC Clearinghouse on Handicapped and Gifted Children . . . . .	26
42. ERIC Clearinghouse on Higher Education . . . . .	27
43. ERIC Clearinghouse on Information Resources . . . . .	28
44. ERIC Clearinghouse for Junior Colleges . . . . .	28
45. ERIC Clearinghouse on Languages and Linguistics . . . . .	29
46. ERIC Clearinghouse on Reading and Communication Skills . . . . .	30

47. ERIC Clearinghouse on Rural Education and Small Schools .....	31
48. ERIC Clearinghouse for Science, Mathematics, and Environmental Education .....	31
49. ERIC Clearinghouse for Social Studies/Social Science Education.....	32.
50. ERIC Clearinghouse on Teacher Education .....	33
51. ERIC Clearinghouse on Tests, Measurement, and Evaluation .....	33
52. ERIC Clearinghouse on Urban Education .....	34
53. Gamma-Ray Spectrum Catalogue.....	35
54. Health and Environmental Studies Program.....	36
55. Health and Safety Analysis Center .....	36
56. High Pressure Data Center .....	37
57. Information Center for Energy Safety (ICES).....	37
58. Information Center for Internal Exposure .....	38
59. Infrared Information and Analysis Center (IRIA) .....	38
60. Institute of Polar Studies .....	39
61. International Demographic Statistics .....	39
62. JILA Atomic Collisions Information Center .....	40
63. Machinability Data Center .....	40
64. Mechanical Properties Data Center (MPDC) .....	41
65. Metals and Ceramics Information Center (MCIC) .....	42
66. Michigan Memorial-Phoenix Project .....	43
67. Molecular Spectra Data Center.....	43
68. Molten Salts Data Center .....	44
69. National Center for Analysis of Energy Systems.....	44
70. National Center for Education Statistics.....	45
71. National Center for Health Statistics .....	46
72. National Clearinghouse for Mental Health Information .....	46

73. National Climatic Center (NCC).....	47
74. National Environmental Satellite Service .....	48
75. National Geophysical and Solar-Terrestrial Data Center.....	48
76. National Geothermal Information Resource.....	49
77. National Meteorological Center (NMC) .....	50
78. National Nuclear Data Center .....	50
79. National Oceanographic Data Center (NODC).....	51
80. National Space Science Data Center .....	52
81. Nondestructive Testing Information Analysis Center (NTIAC) .....	53
82. Nuclear Data Project .....	53
83. Nuclear Safety Information Center.....	54
84. Office of Director, Division of Cancer Treatment.....	54
85. Phase Diagrams for Ceramists .....	55
86. Photonuclear Data Center .....	56
87. Physical Data Group .....	56
88. Plastics Technical Evaluation Center (PLASTEC) .....	57
89. Primate Information Center.....	57
90. Radiation Chemistry Data Center.....	58
91. Radiation Shielding Information Center.....	58
92. Rare-Earth Information Center (RIC) .....	59
93. Reliability Analysis Center .....	60
94. Research Materials Information Center .....	61
95. Shock and Vibration Information Center .....	61
96. Shock Wave Data Center .....	62
97. Suicide Prevention Center and the Institute of Self-Destructive Behavior .....	62
98. Superconductivity Materials Data Center .....	63

99. Table of Isotopes Project .....	63
100. Tactical Technology Center (TACTEC) .....	64
101. Technology Application Center (Tac) .....	65
102. Texas A&M Thermodynamics Research Center (TRC) .....	65
103. Thermophysical Properties Research Center (TPRC) .....	66
104. Toxic Materials Information Center (TMIC) .....	67
105. Toxicology Information Response Center (TIRC).....	68
106. Underground Excavation and Rock Properties Information Center (UERPIC).....	69
107. Water Resources Center .....	69
108. X-Ray and Ionizing Radiation Data Center.....	70
Personal Names Index .....	71
Geographic Index .....	73
Sponsors and Other Organizations Index.....	75
Subject Index.....	83

## **Directory**

**1**

**Advisory Center on Toxicology**  
Division of Chemistry and Chemical Technology  
NAS-NAE-IOM-NRC  
2101 Constitution Ave. NW.  
Washington, D.C. 20418  
Tel: (202) 389-6751  
Director: Ralph C. Wands

**SPONSOR:** Office of Naval Research on behalf of 9 federal agencies.

**YEAR STARTED:** 1957 (Advisory Committee on Toxicology established in 1947).

**STAFF:** 3 to 4 professional, 3 technical, and 5 secretarial.

**MISSION:** To review and evaluate the literature on specific topics in toxicology and serve as a focal point for coordination of toxicology research programs of the sponsors in order to avoid duplication of work; to foster discussion of questions of broad policy on issues involving toxicology and promote the exchange and dissemination of toxicity data; to act as liaison between the sponsors and the Committee on Toxicology of NAS-NRC and assist that Committee in providing advice and recommendations.

**SCOPE:** General toxicology; toxicology of commercial products; toxicology of pollutants.

**HOLDINGS:** Extensive published and unpublished data on the toxicity of materials with emphasis on mammalian toxicology as applied to humans (very little information on pharmaceuticals).

**PUBLICATIONS:** Reports to sponsoring agencies.

**SERVICES:** Answers inquiries; provides advisory and reference services.

**QUALIFIED USERS:** Primarily the sponsoring government agencies, but services are also provided occasionally to other government agencies and to private enterprise if compatible with the sponsors' interests.

**2**

**Aerospace Structures Information and Analysis Center (ASIAC)**

Air Force Flight Dynamics Laboratory/FBR (ASIAC)  
Wright-Patterson Air Force Base, Ohio 45433  
Tel: (513) 255-6688  
Director: Gordon R. Negaard

**SPONSOR:** ASIAC is operated for the Air Force Flight Dynamics Laboratory by Anamet Laboratories, Inc.

**YEAR STARTED:** 1974.

**STAFF:** Full-time structures specialists and information specialists. ASIAC also utilizes Anamet's technical staff on a part-time basis.

**MISSION:** To provide a central agency for the collection and dissemination of aerospace structures information and quick state-of-the-art solutions to structural problems.

**SCOPE:** Aerospace structural design and analysis; experimental structural data; fracture mechanics; failure analysis; structural history; fatigue; service loads; design criteria; composites.

**HOLDINGS:** On-line access to DDC, NTIS, NASA, COMPENDEX, Engineering Index, and CIRCOL computerized data bases; collection of 17,000 documents in microfiche form and 7,500 in hard copy; a library of aerospace structures-related computer programs that are not available from other program dissemination organizations.

**PUBLICATIONS:** *ASIAC Newsletter*; brochure.

**SERVICES:** Answers inquiries; provides consulting, reference, literature-searching, and reproduction services; provides computer programs and information on research in progress; analyzes data; lends materials; makes referrals to other sources of information; permits onsite use of collections. Services are provided free to government agencies and on a cost-recoverable basis to all others.

**QUALIFIED USERS:** Anyone, except foreign governments or personnel.

### 3

#### **Alloy Data Center**

Metallurgy Division  
Institute for Materials Research  
National Bureau of Standards  
Washington, D.C. 20234  
Tel: (301) 921-2917  
Director: Dr. G. C. Carter

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data and the Metallurgy Division, National Bureau of Standards.

**YEAR STARTED:** 1966.

**STAFF:** 2 full-time and 2 part-time, or the equivalent of about 2½ full-time physicists and metallurgists.

**MISSION:** To collect and evaluate data within the scope described below and to stimulate cooperation and coordination among existing data centers within that scope.

**SCOPE:** Properties of metals, alloys, semimetallic materials, and intermetallic compounds. Properties of interest are structure-insensitive properties, including electronic transport properties, magnetic properties, selected mechanical properties, resonance properties, quantum description parameters, electromagnetic radiation, superconductivity, and thermodynamic

properties, including phase diagrams. The Center also collects and critically evaluates data in those areas where special competence exists in the Alloy Physics Section of the Metallurgy Division, with current emphasis on alloy phase diagrams. Other subjects for evaluation were soft X-ray spectra and nuclear magnetic resonance data.

**HOLDINGS:** Copies and annotations of approximately 22,000 research papers in the field of alloy physics and a small library of reference books and journals, including a rather complete collection of phase diagram and related reference books.

**PUBLICATIONS:** *Soft X-Ray Emission Spectra of Metallic Solids: Critical Review of Selected Systems and Annotated Spectral Index* (NBS Spec. Publ. 369); "Relevance of Knight Shift Measurements to the Electronic Density of States," by L. H. Bennett, R. E. Watson, and G. C. Carter, in the *Journal of Research of the National Bureau of Standards*, 74A, 569 (1970); "Nuclear Resonances in Metals: NMR and Mossbauer Effect," by I. D. Weisman, L. J. Swartzendruber, and L. H. Bennett, in "Techniques of Metals Research," 6, Part 2 (1973); *NBS Alloy Data Center: Permuted Materials Index* (1970, NBS Spec. Publ. 324); *NBS Alloy Data Center: Author Index* (1970, available from the National Technical Information Service); *The NBS Alloy Data Center: Function, Bibliographic System, Related Data Centers, and Reference Books* (1968, NBS Tech. Note 464, available from the Superintendent of Documents, Government Printing Office); "Metallic Shifts in NMR," by G. C. Carter, L. H. Bennett, and D. J. Kahan, in *Progress in Materials Science*, 20, 1-2350 (1977); critical reviews published in appropriate journals.

**SERVICES:** Answers inquiries; provides reference and literature-searching services; makes referrals to other sources of information; permits onsite use of collection. Charges are generally made for services, and users must pay actual cost for computer searchers.

**QUALIFIED USERS:** Anyone, within limitation of time available.

**Argonne Code Center**  
Argonne National Laboratory  
9700 South Cass Ave.  
Argonne, Ill. 60439  
Tel: (312) 972-2000 Ext. 7250  
Director: Mrs. Margaret Butler

**SPONSOR:** Department of Energy (DOE) and Nuclear Regulatory Commission (NRC).

**YEAR STARTED:** 1960.

**STAFF:** 13.

**MISSION:** To serve as a central information agency and library for computer programs developed under DOE and NRC funding for their offices and contractors, other federal government and contracting agencies, research and educational institutions, and industrial concerns consistent with guidelines established by DOE and NRC Headquarters program divisions.

**SCOPE:** Computer programs are cataloged in the following areas: Cross-section and resonance-integral calculations; spectrum calculations, generation of group constants, and lattice and cell problems; static design studies; depletion, fuel management, cost analysis, and reactor economics; space-independent kinetics; space-time kinetics, coupled neutronics-hydrodynamics-thermodynamics, and excursion simulations; radiological safety, hazard, and accident analysis; steady-state and transient heat transfer; deformation and stress distribution computations, structural analysis, and engineering design studies; gamma heating and shield design programs; total reactor systems analyses; data preparation; data management; subsidiary calculations; experimental data processing; general mathematical and computing system routines; materials; environmental and earth sciences; space sciences; electronics and engineering equipment; chemistry; particle accelerators and high-voltage machines; physics; controlled thermonuclear research; biology and medicine; and data. The Center's areas of interest also include computer program documentation standards and programming practices to facilitate program interchange.

**HOLDINGS:** Over 750 program packages and 120 Organization for Economic Cooperation and Development Nuclear Energy Agency (OECD NEA) Computer Program Library program packages containing source decks, object decks, sample problems, and documentation and/or data libraries required to make the program usable at another installation.

**PUBLICATIONS:** *Compilation of Computer Program Abstracts* (descriptions of the Center's library collection); *Computer Program Summaries* (descriptions of DOE and NRC-funded computer program development efforts); *Software Newsletter*; the American Nuclear Society Mathematics and Computation Division's *Benchmark Problem Book*; *Directory of Cooperating Installations*; *Bibliographies of Computer Program Literature*.

**SERVICES:** Collects, reviews, maintains, and distributes computer programs, systems, and associated documentation; tests and evaluates library programs to facilitate their use by persons or installations other than the originators; answers technical inquiries concerning computer programs and assists others in program implementation and conversion; performs literature searches, maintains information files, and compiles bibliographies of computer program literature in DOE and NRC program areas; maintains for DOE communications and exchange agreements with other U.S. and foreign computer program information centers; maintains and distributes the OECD NEA Computer Program Library programs and publications in the United States and Canada; develops and participates in cooperative efforts for the preparation of standards and guidelines directed to effective exchange of computer programs; coordinates proposed DOE acquisitions of nongovernmental software and prepares and issues newsletters containing information on commercial software packages, programs and systems developed by other government agencies, and requests for information on particular applications from DOE office and contractor personnel.

**QUALIFIED USERS:** Registered installations, primarily DOE and NRC offices and contractors.

## **5**

**Atomic Energy Levels Data Center**  
Optical Physics Division  
Institute for Basic Standards  
National Bureau of Standards  
Washington, D.C. 20234  
Tel: (301) 921-2011  
Director: Dr. William C. Martin  
Point of Contact: Dr. R. Zalubas

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data, National Bureau of Standards, and the Department of Energy.

**YEAR STARTED:** 1946.

**STAFF:** 2 physicists and 1 full-time clerical assistant.

**MISSION:** To provide critical compilations of data on atomic spectra; classification of spectral lines and determination of atomic energy levels; and a central reference source for energy levels and wavelength data.

**SCOPE:** Atomic spectra and atomic energy levels for neutral and ionic species. Technical areas served are plasma physics, astrophysics, research spectroscopy, thermodynamics, gas laser and space technologies, spectrochemical analysis, and materials and solid state research.

**HOLDINGS:** Energy-level data; card files of references; reprints.

**PUBLICATIONS:** Compilations of atomic energy level and wavelength data; bibliographies on atomic spectral data.

**SERVICES:** Answers inquiries; provides consulting and reference services; distributes publications.

**QUALIFIED USERS:** Anyone interested.

**Institute for Basic Standards**  
**National Bureau of Standards**  
**Washington, D.C. 20234**  
**Tel: (301) 921-3374**  
**Director: Dr. Wolfgang L. Wiese**  
**Point of Contact: Georgia A. Martin**

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data and the Optical Physics Division, National Bureau of Standards.

**YEAR STARTED:** 1960.

**STAFF:** 2 equivalent full-time professionals.

**MISSION:** To collect and catalog all relevant literature, to extract and analyze the numerical data, and to prepare and publish bibliographies and tables of "best" atomic transition probabilities. Papers are cataloged according to author, element, stage of ionization, and method used. Critical evaluations are done on selected elements where there is sufficient interest and enough material available. Bibliographies on all available literature have been prepared, and the first 25 elements (hydrogen through manganese) and barium I and II have been critically analyzed. A critical evaluation of iron, cobalt, and nickel is in progress, as well as a complete updated bibliography.

**SCOPE:** Radiative transition probabilities of atoms and atomic ions; intensities of spectral lines; radiative lifetimes of atomic and ionic states.

**HOLDINGS:** Almost 3,000 papers on transition probabilities copied from books and journals dating back to 1916. The collection is kept up to date by constant monitoring of the current literature through several title and abstracting journals. A reprint or copy of each article has been cataloged and filed according to a general indexing system based on the type of experimental or theoretical method used. Papers containing numerical data are further cataloged as to element and ionization state.

**PUBLICATIONS:** "Atomic Transition Probabilities (H through Ne—A Critical Data

## **6**

**Atomic Transition Probabilities Data Center**  
Optical Physics Division

Compilation)" (by W. L. Wiese, M. W. Smith, and B. M. Glennon; Nat. Stand. Ref. Data Ser. 4, Vol. I, 1966); "Atomic Transition Probabilities (Na through Ca—A Critical Data Compilation)" (by W. L. Wiese, M. W. Smith, and B. M. Miles; Nat. Stand. Ref. Data Ser. 22, Vol. II, 1969); "Critically Evaluated Transition Probabilities for Ba I and II" (by B. M. Miles and W. L. Wiese; NBS Tech. Note 474, 1969); "Bibliography on Atomic Transition Probabilities for (January 1966 through June 1969)" (by B. M. Miles and W. L. Wiese; NBS Spec. Publ. 320, 1970); "Graphical Presentations of Systematic Trends of Atomic Oscillator Strengths Along Isoelectronic Sequences and New Oscillator Strengths Derived by Interpolation" (by M. W. Smith and W. L. Wiese; Astrophys. J. Suppl. Ser. 23, No. 196, 103-192, 1971); "Bibliography on Atomic Transition Probabilities (July 1969 through June 1971)" (by J. R. Fuhr and W. L. Wiese; NBS Spec. Publ. 320, Suppl. 1, 1971); "Atomic Transition Probabilities for Forbidden Lines of the Iron Group Elements (A Critical Data Compilation for Selected Lines)" (by M. W. Smith and W. L. Wiese; J. Phys. Chem. Ref. Data 2, 85-120, 1973); "Bibliography on Atomic Transition Probabilities (July 1971 through June 1973)" (by J. R. Fuhr and W. L. Wiese; NBS Spec. Publ. 320, Suppl. 2, 1973); "Atomic Transition Probabilities for Scandium and Titanium (A Critical Data Compilation of Allowed Lines)" (by W. L. Wiese and J. R. Fuhr; J. Phys. Chem. Ref. Data 4, 263-352, 1975); "Tables of Critically Evaluated Oscillator Strengths for the Lithium Isoelectronic Sequence" (by G. A. Martin and W. L. Wiese; J. Phys. Chem. Ref. Data 5, 537-570, 1976); "Atomic Oscillator Strength Distributions in Spectral Series of the Lithium Isoelectronic Sequence" (by G. A. Martin and W. L. Wiese; Phys. Rev. A 13, 699-714, 1976).

**SERVICES:** Answers inquiries; provides consulting, reference, and literature-searching services; permits onsite use of collection. Services are free to all users.

**QUALIFIED USERS:** Scientists with professional interest in the field.

## 7

### Berkeley Particle Data Group

Lawrence Berkeley Laboratory  
Building 50, Room 308  
University of California  
Berkeley, Calif. 94720  
Tel: (415) 843-2740 Ext. 5885  
Director: Dr. Robert L. Kelly

**SPONSORS:** Department of Energy; Office of Standard Reference Data, National Bureau of Standards; and National Science Foundation. The Center is affiliated with the National Standard Reference Data System.

**YEAR STARTED:** 1958.

**STAFF:** 5 full-time and 2 part-time elementary particle physicists, 2 computer programmers, 1 technical assistant, and 1 part-time secretary. Additional assistance is provided by collaborators throughout the world.

**MISSION:** To collect, compile, evaluate, average, summarize, reference, list, display, and disseminate data on the properties and interactions of elementary particles (photons, leptons, mesons, and baryons) and resonances.

**SCOPE:** Elementary particles, their properties and interactions; high energy physics; nuclear physics; photons, leptons, hadrons, mesons, and baryons; resonances; scattering; mass; lifetime; decay properties; cross sections; differential cross sections.

**HOLDINGS:** Data compilations on magnetic tape; articles published in the field of experimental particle physics since January 1968.

**PUBLICATIONS:** Annual "Review of Particle Properties" in *Reviews of Modern Physics* and *Physics Letters*; particle properties data booklet; compilations of cross section data; index of accelerator proposals, preprints, reports, and articles in experimental elementary particle physics.

**SERVICES:** Provides data retrieval and

bibliographic searches to meet requirements of individual physicists.

**QUALIFIED USERS:** Sponsoring agencies and their contractors and physicists engaged in high-energy research who provide information on an exchange basis or under bilateral agreements.

## 8

**Biomedical Computing Technology Information Center**  
Oak Ridge National Laboratory  
P.O. Box X  
Oak Ridge, Tenn. 37830  
Tel: (615) 483-8611 Ext. 3-0293  
Director: Betty F. Maskewitz

**SPONSORS:** Department of Energy, Division of Biomedical and Environmental Research (DBER); Society of Nuclear Medicine; Bureau of Radiological Health; and Society for Computer Medicine.

**YEAR STARTED:** 1975.

**STAFF:** 1 full-time, 4 part-time, and a 10-member technical advisory committee.

**MISSION:** To serve as an information exchange medium in the biomedical community with the purpose of saving time and preventing duplication of work.

**SCOPE:** The Center serves the field of biomedicine in general and nuclear medicine in particular by collecting, organizing, evaluating, and disseminating information in computing technology. In addition to published information, the Center acts as a clearinghouse to collect and package algorithms, computer programs, data, and interface designs pertinent to clinical and/or research biomedicine.

**HOLDINGS:** A computerized file of information containing bibliographic citations and a collection of computer code and data packages.

**PUBLICATIONS:** Newsletter (bimonthly); proceedings of seminars, workshops, and topical

meetings; *Directory of Computer Users in Nuclear Medicine*; bibliographies, abstracts.

**SERVICES:** Answers inquiries and fills requests for computer code and data packages; provides bibliographies and abstracts; provides technical conferring services and personal assistance to visitors to the Center; participates in seminars, workshops, and topical meetings on biomedical computing technology and publishes and distributes the proceedings.

**QUALIFIED USERS:** Any organization or individual willing to participate in mutual exchange.

## 9

**Brain Information Service**  
UCLA School of Medicine  
Los Angeles, Calif. 90024  
Tel: (213) 825-6011 or 825-3417  
Director: Michael Chase, Ph. D. (Professor of Physiology)  
Point of Contact: Mrs. Pat Walter, Assistant Director for Information Services

**SPONSOR:** National Institute of Neurological and Communicative Disorders and Stroke of the National Institutes of Health.

**YEAR STARTED:** 1964.

**STAFF:** 15 full-time equivalents, including information scientists with life sciences training, computer specialists, clerical support personnel, editorial support, and the director.

**MISSION:** To serve as a national focal point for identification, collection, storage, retrieval, analysis, evaluation, and dissemination of information in the neurosciences, and to do this rapidly, accurately, and completely by means of computer-aided systems.

**SCOPE:** The subject of the Service encompasses neuroanatomy, neurophysiology, neuroendocrinology, neurochemistry, neuropharmacology, and the neural basis of behavior.

**HOLDINGS:** Computer-based data bank of bibliographic citations.

**PUBLICATIONS:** (1) *Index to Current Literature* (published monthly in the journal *Electroencephalography and Clinical Neurophysiology*); (2) six current-alerting bulletins with annual cumulations: *Sleep Bulletin*; *Memory and Learning: Research in the Nervous System*; *Developmental Neurobiology*; and *Memo of Current Books in the Brain Sciences* (all monthly) and *Neuroendocrine Control Mechanisms: Hypothalamic-Pituitary-Gonadal System and Biogenic Amines and Neurotransmitters in the Nervous System* (both semimonthly); (3) four recurrent bibliographies: *Proteins in the Brain*; *Cerebral Evoked Potentials (including CNS)*; *Neuroimmunology*; and *Endorphins and Opiate Receptors in the CNS* (quarterly); (4) atlases, books, research reports, demand bibliographies. A publications list is available.

**SERVICES:** In addition to its numerous publications, the Service provides bibliographies on demand to scientists across the country. These are compiled by information specialists with both library and subject background. Input to the computerized data base is assembled from a core of the most actively-used neurological journals and monographs directly on publication, from the monthly magnetic tapes of the National Library of Medicine's Medical Literature Analysis and Retrieval System (MEDLARS), and from biological publications not included in MEDLARS. Services are provided at cost to all users.

**QUALIFIED USERS:** All investigators, teachers, and students.

## 10

### Breeder Reactor Fuel Systems Information Center

Westinghouse Hanford Co.

Hanford Engineering Development Laboratory

P.O. Box 1970

Richland, Wash. 99352

Tel: (509) 942-0278

(FTS) 444-0278

Manager: F. R. Shober

**SPONSOR:** Division of Reactor Development and Demonstration of the Department of Energy.

**YEAR STARTED:** 1969.

**STAFF:** 1 manager-materials specialist, 1 fuels specialist, 2 technicians, 1 secretary, 1 clerk, 1 computer programmer-analyst, and 1 part-time consultant.

**MISSION:** To (1) provide nuclear engineers and scientists with a broad base of engineering and mechanical properties data on breeder reactor nuclear fuels and cladding materials, and (2) maintain a central data source of materials performance from irradiation tests on experimental mixed oxide fuel elements and FFTF (Fast Flux Test Facility) driver fuel elements.

**SCOPE:** Fuel and cladding materials technology data for the mixed oxide reference fuels and materials development program.

**HOLDINGS:** A computerized data base of approximately 20 reels of magnetic tape and 90 reels (about 180,000 pages) of 16mm microfilm containing cladding fabrication data, fuel pin fabrication data, mechanical properties, irradiation history data, post-irradiation examination results, transient irradiation tests, breached cladding file, and data on production of mixed oxide fuel pins for the FFTF.

**PUBLICATIONS:** Computer-prepared data compilations for limited distribution.

**SERVICES:** Answers inquiries; evaluate data; provides data compilations. Data are available directly from the computer in the form of tables, plotted curves, and simple statistical analyses. Services, unless extensive, are free.

**QUALIFIED USERS:** Persons so designated by the Division of Reactor Development and Demonstration of the Department of Energy.

## 11

### Bureau of Drugs—Division of Poison Control

Food and Drug Administration

5401 Westbard Ave., Room 302

Bethesda, Md. 20016

Tel: (301) 496-7691

Director: John J. Crotty, M.D.

The Division is best known by its former name, the National Clearinghouse for Poison Control Centers.

**YEAR STARTED:** 1957.

**STAFF:** 1 pediatrician, 4 pharmacists, 1 chemist, 1 pharmacologist, and 7 supporting personnel, all full-time.

**MISSION:** To evaluate potential hazards of household chemical products and to supply poison control centers with treatment recommendations for use in case of ingestion.

**SCOPE:** The Division obtains information from industry (mainly formulas), journals, textbooks, and other sources (e.g., poisoning reports from poison control centers) on formulation, toxicity, symptomatology, and treatment of household products and medicine for use in case of accidental poisoning. It then evaluates this material to determine the most reliable data on formulation, toxicity, symptomatology, and treatment of poisoning.

**HOLDINGS:** Thousands of poison reports; data on antidotes and ingredients of new products supplied by manufacturers of drugs and household products.

**PUBLICATIONS:** *Bulletin of the National Clearinghouse for Poison Control Centers* (monthly).

**SERVICES:** Provides affiliated poison control centers with information regarding antidotes and ingredients of products. A directory of affiliated poison control centers lists all centers in the United States that have been appointed and are recognized by their respective State Health Departments. The centers provide for the medical profession, on a 24-hour basis, information concerning the prevention and treatment of accidents involving ingestion of poisonous and potentially poisonous substances.

**QUALIFIED USERS:** Poison control centers.

## 12

### **Bureau of Mines—Associate Director, Mineral and Materials Supply/Demand Analysis**

Columbia Plaza  
2401 E St. NW., Room 1038  
Washington, D.C. 20241

Tel: (202) 634-1330  
634-1004 (hot-line service)  
Associate Director: Dr. John D. Morgan, Jr.

**STAFF:** Approximately 500, with specialties in all areas of the minerals industries, including 4 field offices and state liaison officers covering all 50 states.

**MISSION:** To collect, analyze, and disseminate information on minerals. \*

**SCOPE:** Worldwide mineral supply/demand (metals, nonmetallics, mineral fuels); mineral economics; conservation of minerals; water, power, transportation, manpower, etc. requirements of the mineral industry; environmental problems; mineral production, consumption, imports, exports, and prices, by commodity and state—monthly, quarterly, annually, and more frequently in emergencies; international mineral developments.

**HOLDINGS:** Copies of the *Minerals Yearbook* and its predecessors from 1867 to the present; mining company annual reports to stockholders; data bases, including the Minerals Availability System (a mineral deposit-oriented data base). Information in the Minerals Availability System is proprietary and therefore not made available to the public due to the level of detail in which it is stored; it may be summarized when requested and the summaries are usually made available.

**PUBLICATIONS:** Reports of studies conducted by the Associate Director's office are included in the Bureau of Mines' series of publications.

**SERVICES:** Answers inquiries; maintains telephone hot-line service; provides some computer tapes and consulting and reference services;

makes interlibrary loans to other federal agencies; makes referrals to other sources of information; permits onsite use of collections. Any fees charged would depend on the scope and complexity of the services rendered.

**QUALIFIED USERS:** No restrictions, except as specified above.

## 13

### Bureau of Mines—Alaska Field Operations

#### Center

P.O. Box 550

Juneau, Alaska 99801

Tel: (907) 364-2111

Chief: John J. Mulligan

Point of Contact: Margaret J. Mattson, Library Technician

**YEAR STARTED:** 1950.

**STAFF:** 1 petroleum engineer, 10 mining engineers, 6 geologists, and support personnel.

**MISSION:** To conduct engineering studies of mineral and energy reserves and resources; to evaluate and interpret production methods to determine the most effective practices for production in Alaska; to perform investigations designed to promote development of these resources; to determine the relationship of supply and technology to the national and world economy; and to develop special programs for conservation, environmental improvement, and abatement of air and water pollution.

**SCOPE:** Mining; geology; mining costs; mineral deposits and resources; Arctic engineering; wilderness studies; environmental studies; mineralogy; land use selection and classification (with regard to minerals); petroleum exploration and research; pollution control; mineral exploration (physical, geophysical, geochemical); permafrost studies and engineering; energy resource evaluation and study.

**HOLDINGS:** Maps, microfilm and microfiche, vertical files, books, documents, periodicals, and serials in the field of geology, mineral deposits, mining, and economics of mineral availability in

Alaska and northern or Arctic regions. Included in the collection are Bureau of Mines and U. S. Geological Survey publications, Army Cold Regions Research and Engineering Laboratory publications and papers, and Alaska Territory and State documents and reports.

**PUBLICATIONS:** Writings produced by the Center's staff are published in one or more of the Bureau of Mines' series of publications.

**SERVICES:** Answers inquiries; provides consulting, reference, literature-searching, and duplication services; lends materials; conducts cooperative research, evaluation, and investigations with other federal and state agencies; makes referrals to other sources of information; distributes publications; permits onsite use of collection. Services are free.

**QUALIFIED USERS:** No restrictions, except in the case of confidential information.

## 14

### Bureau of Mines—Eastern Field Operations

#### Center

4800 Forbes Ave.

Pittsburgh, Pa. 15213

Tel: (412) 621-4500 Ext. 352

(FTS) 621-4352

Chief: Robert D. Thomson

**YEAR STARTED:** 1952.

**STAFF:** 38 full-time, with specialties in mining engineering, geology, metallurgy, and economics.

**MISSION AND SCOPE:** To perform engineering and technical investigations to evaluate mineral reserves, mineral land assessments, technological and environmental aspects of mining, and mineral information activities in the 26 states east of the Mississippi River.

**HOLDINGS:** Computerized data bases on bituminous coal, minerals (metals and non-metals), mining operation locations, and mine maps.

**PUBLICATIONS:** Writings produced by the Center's staff are published in one or more of the Bureau of Mines' series of publications.

**SERVICES:** Answers requests for information on minerals and mining.

**QUALIFIED USERS:** Anyone.

## 15

### Bureau of Mines—Western Field Operations Center

East 315 Montgomery Ave.

Spokane, Wash. 99207

Tel: (509) 484-1610

Chief: Richard N. Appling, Jr.

**YEAR STARTED:** 1941.

**STAFF:** 43 full-time, including geologists, engineers, and various physical and social scientists.

**MISSION AND SCOPE:** To collect and analyze data relating to mineral deposits, mineral industries, mineral economics, deposit evaluation, and mining and processing costs, primarily in the states of Oregon, Washington, Idaho, Montana, California, and Nevada.

**HOLDINGS:** Engineering and geological publications of the Bureau of Mines, U.S. Geological Survey, and western state bureaus. The library contains 1,600 books, 10,200 technical and miscellaneous reports, and 93 periodicals, 20 of which are bound. The Center also has access to computerized files, including the Mineral Information and Location System (a file of mineral properties and processing plants relating to mineral production), the Minerals Availability System (a file that will cover all minerals resources available to domestic industries), and a file containing sample analyses and location data on over 5,000 samples of deep ocean manganese nodules from the Pacific and Indian Oceans. Mine maps of operations of the six western states are being gathered in a repository.

**PUBLICATIONS:** Writings produced by the Center's staff are published in one or more of the Bureau of Mines' report series; joint studies with the U.S. Geological Survey are presented in its bulletin series.

**SERVICES:** Answers inquiries; provides consulting, current-awareness, and reference services; makes referrals to other sources of information; permits onsite use of collection.

**QUALIFIED USERS:** Anyone.

## 16

### Center for Climatic and Environmental Assessment (CCEA)

Environmental Data Service, NOAA

Federal Bldg., Room 116

600 East Cherry St.

Columbia, Mo. 65201

Tel: (314) 442-2271 Ext. 3261 (Headquarters  
and Model Development Division)

(FTS) 276-3261

Director: Norton D. Strommen

#### *Climatic Assessment Division:*

2001 Wisconsin Ave.

Washington, D.C. 20235

Tel: (202) 634-1996

#### *LACIE Section:*

Johnson Space Center

NASA

Houston, Tex. 77058

Tel: (713) 483-3057

**YEAR STARTED:** 1974.

**STAFF:** Professionals on the staff are social and geophysical scientists with broad experience in environmental and computer disciplines. Other experts are available to CCEA from within NOAA (e.g., from the National Weather Service and the National Marine Fisheries Service) and interagency cooperative agreements provide consultants from other federal agencies. Supplemental economic and engineering research sup-

port is available to CCEA through contracts with universities and private industry.

**MISSION:** To determine (1) how to extend our present abilities for observing and assessing short-term weather events to evaluate longer-term environmental fluctuations of climate and (2) how to put knowledge thus gained to work in ways that are meaningful in terms of crop production estimates, resources management, energy utilization, etc.

**SCOPE:** Long-term climatic variability assessment, including the development of mathematical models of certain key elements and relationships so that scientists can, by varying the quantities in the model, determine the consequences of various changes within those relationships; assessment of large-scale climatic changes and their impact on energy demand in the United States, global grain production, and fish production in coastal waters and the open ocean. One CCEA area of special effort is the Large Area Crop Inventory Experiment (LACIE), a joint program of NOAA, NASA, and the Department of Agriculture, which is intended to improve the timeliness and accuracy of major crop assessments by combining current and historical weather crop information with data from surface sources and satellites. CCEA's role in LACIE is to provide processed climatological and meteorological data and to develop and refine statistical models that relate climatic variations to their impact on crop yield.

**HOLDINGS:** Computerized climatological and meteorological data sets.

**PUBLICATIONS:** Special studies; brochure.

**SERVICES:** Provides (1) early warning through timely crop-climate assessments, (2) periodic crop yield estimates, (3) global weather briefings linking climate and socioeconomic systems, and (4) assessments of risks of damage to national resources by climatic variation.

**QUALIFIED USERS:** No restrictions.

## 17

**Center for Experiment Design and Data Analysis**  
Environmental Data Service, NOAA  
3300 Whitehaven St.  
Washington, D.C. 20235  
Tel: (202) 634-7324  
Director: Dr. Joshua Z. Holland

**YEAR STARTED:** 1969.

**STAFF:** 70 full-time and 10 part-time, including meteorologists, oceanographers, ecologists, economists, computer systems analysts and programmers, mathematicians, and physicists.

**MISSION:** To provide services, support, and advanced techniques in data acquisition, data management, and scientific analysis and interpretation of data for atmospheric and marine environmental assessment.

**SCOPE:** The Center currently is (1) producing final scientific reports on 2 subprojects (atmospheric water balance and atmospheric boundary layer) of the International Field Year for the Great Lakes (IFYGL, 1972-73); (2) analyzing data (on convection and precipitation, atmospheric momentum budgets, and air-sea boundary layer interaction) collected in the Global Atmospheric Research Program Atlantic Tropical Experiment (GATE, 1974); (3) designing and managing a marine environmental monitoring program for brine disposal in the Gulf of Mexico from leaching of salt domes, under an agreement with the Federal Energy Administration in connection with the Strategic Petroleum reserve; (4) assessing the environmental and economic impacts of proposed deepwater ports; and (5) performing miscellaneous tasks (data management; data processing; data analysis, summarization, and interpretation; data base management system design and implementation; and environmental risk assessment model development) for NOAA's Office of Coastal Zone Management, Air Resources Laboratory, Outer Continental Shelf Energy Assessment Program, Ocean Dumping Program, and Center for Climatic Environmental

Assessment, and under agreements with the Bureau of Land Management.

**HOLDINGS:** Working data bases.

**PUBLICATIONS:** *NOAA Technical Memorandum BOMAP* series (dealing with the Barbados Oceanographic and Meteorological Experiment (BOMEX)); *BOMEX Atlas* series; *BOMEX Bulletin* series; *IFYGL Bulletin* series; *NOAA Technical Memorandum CEDDA* series; *NOAA Technical Reports EDS* series; *GATE International Meteorological Radar Atlas* (1977); *The Argo Merchant Oil Spill—A Preliminary Scientific Report* (1977); series of *Reports to FEA/SPR/Salt Dome Storage—Analysis of Brine Disposal in the Gulf of Mexico* (1977); journal articles.

**SERVICES:** Analyzes physical, chemical, ecological, and economic impacts of human activities in the marine environment; analyzes meteorological, climatic, and oceanographic data in response to objectives and requirements of sponsoring programs and projects; prepares data bases and data sets for research or applications from raw field observations or from processed or archived data; reduces and processes data; designs, implements, and operates data processing systems for large-scale environmental measurement programs; consults on design and operation of field data acquisition systems. Services requiring substantial investment of effort and resources are generally provided on a reimbursable basis.

**QUALIFIED USERS:** Federal agencies and the national and international scientific community.

## 18

### **Center for Information on Internal Dosimetry of Radiopharmaceuticals**

Oak Ridge Associated Universities  
P.O. Box 117  
Oak Ridge, Tenn. 37830  
Tel: (615) 483-8411 Ext. 261  
Director: Evelyn E. Watson

**SPONSORS:** Food and Drug Administration and Department of Energy.

**YEAR STARTED:** 1971.

**STAFF:** 2½ information and library professionals; other part-time clerical and non-professional.

**MISSION:** To collect, interpret, and correlate available information on the radiation dose that patients receive from diagnostic drugs containing radioactive materials. The information is obtained both from published sources and from clinical experience at nuclear medicine centers.

**SCOPE:** Radiation dose from radiopharmaceuticals.

**HOLDINGS:** Computerized data base on the characteristics of medical radiopharmaceuticals, including distribution patterns, uptakes, disappearance times, and variations in metabolism according to the age, sex, disease, and condition of the patient; small collection of books, periodicals, and reports.

**PUBLICATIONS:** Reports.

**SERVICES:** Answers inquiries.

**QUALIFIED USERS:** No restrictions.

## 19

### **Chemical Kinetics Information Center**

Physical Chemistry Division  
Institute for Materials Research

National Bureau of Standards  
Washington, D. C. 20234

Tel: (301) 921-2174

Director: Dr. Robert Hampson

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data and the Office of Air and Water Measurement, National Bureau of Standards, and by the U. S. Department of Transportation and the National Aeronautics and Space Administration.

**YEAR STARTED:** 1962.

**STAFF:** 2 professional; 1 semiprofessional; 2 clerical.

**MISSION:** The long-term mission is to (a) serve as a supplier of specific kinetic data; (b) provide bibliographic material to authors of critical reviews for the National Standard Reference Data System; and (c) answer requests from the public for information on chemical kinetics.

**SCOPE:** Rates of homogeneous chemical reactions in gaseous, liquid, and solid phases; photochemistry; inelastic scattering. Excluded are heterogeneous catalysis and radiation chemistry.

**HOLDINGS:** Collection of articles, reports, theses, and bibliographies.

**PUBLICATIONS:** Bibliographies, tables, rate data.

**SERVICES:** Answers brief inquiries; provides data and bibliographic information on published research on rates of chemical reactions; permits onsite use of collection.

**QUALIFIED USERS:** All scientists and technical personnel with professional interests.

## 20

### **Chemical Propulsion Information Agency (CPIA)**

Applied Physics Laboratory

The Johns Hopkins University

Johns Hopkins Rd.

Laurel, Md. 20810

Tel: (301) 953-7100 Ext. 7800, 7801, or 7802

Supervisor: Dr. Peter L. Nichols

Point of Contact: Mrs. Jeanne Wysong

**SPONSORS:** CPIA is a DOD Information Analysis Center administered by the Defense Logistics Agency (DLA) and the Naval Air Systems Command (AIR-330). It is supported by DLA and service charges received from the military services, NASA, other government agencies, private industry, and educational institutions.

**YEAR STARTED:** 1946 (as Solid Propellant Information Agency).

**STAFF:** 10 professional physicists, chemists, and engineers and 10 supporting staff members. The CPIA also receives technical support through its collaboration with the Joint Army-Navy-NASA-Air Force (JANNAF) Interagency Propulsion Committee and its Working Groups. JANNAF members are government personnel active as technical managers in chemical propulsion and Working Group participants are government and contractor specialists actually engaged in propulsion-related programs.

**MISSION:** To systematically acquire, compile, analyze, and disseminate pertinent information and data in the area of chemical rocket propulsion.

**SCOPE:** Information and data on the research, development, test, and evaluation of chemical rockets, including solid, liquid, hybrid, and air-breathing rocket propulsion systems. (This includes propellant and ingredient characterization, formulation, and performance; combustion; exhaust plume characterization; safety and environmental protection; propulsion unit design and ballistics and structural performance; and overall propulsion unit operational serviceability.)

**HOLDINGS:** Approximately 47,000 hard copy and microfiche reports that document efforts in propulsion technology, including solid rocket propulsion reports from 1946 and liquid propulsion reports from 1956.

**PUBLICATIONS:** *Chemical Propulsion Abstracts* (8 issues a year, with an annual cumulative, indexed volume); *Liquid Propellant Manual*; *Liquid Propellant Engine Manual*; *Solid Rocket Motor Manual*; *Solid Propellant Manual*; *Air-breathing Propulsion Manual*; *Bulletins* of the Joint Army-Navy-NASA-Air Force (JANNAF) Interagency Propulsion Committee-sponsored meetings and symposia that are coordinated by the CPIA; *Chemical Propulsion Newsletter*. The outputs of JANNAF Working Groups are recorded in *Working Group Bulletins* and other publications

that are initially distributed to the Working Group participants and made available to other CPIA users on an individual request basis. The *Chemical Propulsion Mailing List* is maintained by the CPIA to promote direct exchange of chemical propulsion technical information among selected government facilities and contractors. *State-of-the-Art Reports* are prepared by the CPIA technical staff and consultants, with assistance of government and industry scientists as necessary. More than half of the publications are at the Confidential security level.

**SERVICES:** Answers inquiries; provides consulting, reference, and literature-searching services; permits onsite use of collection by approved users. Fees are determined on an annual total-package basis rather than an individual service basis.

**QUALIFIED USERS:** Government agencies and their contractors who maintain an active confidential-level registration with the Defense Documentation Center.

**SCOPE:** Thermochemical and thermophysical properties of pure chemical substances in gas, liquid, and solid phases, and their aqueous solutions, including enthalpy of reactions, enthalpy of formation, free energy of formation, entropy, equilibrium constants, heat capacity, and phase transition data.

**HOLDINGS:** About 140,000 file cards containing thermodynamic information extracted from about 65,000 articles, reports, theses, and books; about 25,000 microfilm copies of articles that have been abstracted.

**PUBLICATIONS:** *Selected Values of Chemical Thermodynamic Properties* (NBS Circular 500, out of print; revisions in NBS Tech. Notes 270-3 to 270-7 and others to follow); *Thermal Properties of Aqueous Uni-univalent Electrolytes* (Monograph NSRDS--NBS 2); NBSIR Reports 77-1300 and 76-1034 on thermodynamic properties of Th, Na, K, and Rb compounds. The Center also prepares an annual subject-property index of thermodynamic literature for the *Bulletin of Thermodynamics and Thermochemistry*, published at the University of Michigan, Ann Arbor, Mich.

**SERVICES:** Answers inquiries; provides consulting services; participates in the CODATA Task Group on Key Values for Thermodynamics.

**QUALIFIED USERS:** The technical and scientific community. Extensive services are provided only to government agencies and contractors.

## 21

**Chemical Thermodynamics Data Center**  
Physical Chemistry Division  
Institute for Materials Research  
National Bureau of Standards  
Washington, D.C. 20234  
Tel: (301) 921-2111  
Director: Donald D. Wagman  
Point of Contact: Eugene S. Domalski

**SPONSOR:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data, National Bureau of Standards.

**YEAR STARTED:** 1940.

**STAFF:** 8 chemists (5 data analysts and 3 abstractors (2 part-time), 1 technical assistant, and 2 clerks.

**MISSION:** To provide critically analyzed and evaluated data on the chemical thermodynamic properties of chemical substances.

## 22

**Cold Regions Science and Technology Information Analysis Center**  
Army Cold Regions Research and Engineering Laboratory  
P.O. Box 282  
Hanover, N.H. 03755  
Tel: (603) 643-3200 Ext. 339  
Chief: Wesley Pietkiewicz

**SPONSOR:** Army Cold Regions Research and Engineering Laboratory.

**YEAR STARTED:** 1949.

**STAFF:** 150 professional and 110 nonprofessional.

**MISSION:** To collect, evaluate, and disseminate technical information and data on (1) cold regions science and technology, (2) the design, construction, and maintenance of military facilities in cold regions, and (3) the conduct of snow, ice, and frozen ground investigations.

**SCOPE:** Cold regions; snow, ice, and frozen ground; materials, facilities, systems, and operations in cold environments, including building construction, utilities, waste water disposal, and pollution control; methods and techniques of using various energy forms and systems to obtain information about surface and subsurface features in cold environments for engineering, military, and related scientific purposes.

**HOLDINGS:** About 12,000 books, 100,000 technical reports, 400 journals, 20,000 still photographs, 1,000 graphs, and 70,000 microforms; small collection of maps on arctic and antarctic regions.

**PUBLICATIONS:** *Current Literature—Cold Regions Science and Technology* (monthly current-awareness report) and *Bibliography on Cold Regions Science and Technology* (annual, with indexes), both compiled by the Science and Technology Division of the Library of Congress; *Cold Regions Science and Engineering* (monograph series, 31 published to date). Publications are for sale by the National Technical Information Service (NTIS).

**SERVICES:** Answers technical inquiries; provides consulting and identification services; makes interlibrary loans; makes referrals to other sources of information. Charges are made for services requiring extensive time.

**QUALIFIED USERS:** Government agencies and others on a need-to-know basis.

## 23

### **Controlled Fusion Atomic Data Center Oak Ridge National Laboratory**

**P.O. Box X**  
**Oak Ridge, Tenn. 37830**  
**Tel: (615) 483-8611 Ext. 3-0141**  
**Director: Dr. C. F. Barnett**

**SPONSOR:** Department of Energy.

**YEAR STARTED:** 1963.

**STAFF:** 10 scientists (part-time) and 3 non-technicals (full-time).

**MISSION:** To review and evaluate data pertaining to atomic collisions of interest to controlled thermonuclear research.

**SCOPE:** Collisions involving charged and neutral particles with gases and surfaces, with emphasis on those processes that are of direct interest to controlled thermonuclear research.

**HOLDINGS:** Bibliography of collision processes; books, journals, data compilations.

**PUBLICATIONS:** Data compilations and state-of-the-art reviews. The data compilations are sold by the U.S. Government Printing Office or provided by the Center to qualified users.

**SERVICES:** Answers inquiries; provides information on current research and development projects; makes referrals to other sources of information; permits onsite use of collection.

**QUALIFIED USERS:** Government agencies and their contractors, research and educational institutions, and industry.

## 24

**Cryogenic Data Center**  
**Cryogenics Division, 275.02**  
**National Bureau of Standards**  
**Boulder, Colo. 80302**  
**Tel: (303) 499-1000 Ext. 3257**  
**Director: Neil A. Olien**

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference

Data and the Cryogenics Division, National Bureau of Standards, and by the National Aeronautics and Space Administration and the American Gas Association.

YEAR STARTED: 1958.

STAFF: Full-time: 4 physicists, 1 chemist, 2 engineers, 1 documentation supervisor, and 3 clerks. Part-time: 1 physicist, 1 engineer, and 3 clerks.

MISSION: To identify, acquire, and store information pertaining to the field of cryogenics, with emphasis on the properties of materials; to operate an information storage and retrieval system for this information; and to evaluate and publish standard reference data on the properties of fluids.

SCOPE: Cryogenics; properties of materials; low temperature physics; superconductivity; liquefied natural gas; thermodynamics; transport properties of fluids; liquefaction; superfluids.

HOLDINGS: 110,000 documents (hard copy and microform) covering the scientific and technical literature of low temperature physics and cryogenic engineering.

PUBLICATIONS: 4 subscription services: *Current Awareness Service* (biweekly), *Superconducting Devices and Materials Quarterly*, *Liquefied Natural Gas Quarterly*, and *Hydrogen—Future Fuel* (quarterly). The Center also publishes bibliographies, data compilations, data handbooks, and thermodynamic property charts (the Center has an experimental group engaged in the measurement of the thermophysical properties of cryogenic fluids).

SERVICES: Answers inquiries; provides consulting and literature-searching services; permits onsite use of collection.

QUALIFIED USERS: Anyone.

25

Crystal Data Center  
Inorganic Materials Division

Institute for Materials Research  
National Bureau of Standards  
Washington, D.C. 20234  
Tel: (301) 921-2837 or 921-2900  
Directors: Dr. Helen M. Ondik and  
Dr. Alan D. Michell

SPONSORS: The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data and the Inorganic Materials Division, National Bureau of Standards.

YEAR STARTED: 1963.

STAFF: 3 crystallographers and 1 technical assistant, all full-time.

MISSION: To bring up to date the volumes of *Crystal Data* and issue supplements; to maintain this semicritical compilation; to identify crystalline substances by single-crystal data; to collect and maintain information on crystalline materials; and to establish a data bank for storage and retrieval of the data.

SCOPE: Crystallographic data, especially cell dimensions, space group, density, habit, cleavage, twinning, refractive indices, melting point, and simple structure information on inorganic and organic crystals.

HOLDINGS: Crystallographic data of inorganic and organic compounds compiled from journals, reports, and patents.

PUBLICATIONS: *Crystal Data* (book—available from the Office of Standard Reference Data and the Joint Committee on Powder Diffraction Standards, 1601 Park Lane, Swarthmore, Pa. 19081; tape—available as NBS Magnetic Tape 9 from the National Technical Information Service).

SERVICES: Answers inquiries; provides X-ray crystallographic data on all crystalline substances.

QUALIFIED USERS: All scientific and technical personnel.

## 26

### Data Center for Ion Energetics

Physical Chemistry Division

Institute for Materials Research

National Bureau of Standards

Washington, D.C. 20234

Tel: (301) 921-2792

Supervisor: Dr. Henry M. Rosenstock

Point of Contact: C. L. Schmidt

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data and the Physical Chemistry Division, National Bureau of Standards.

**YEAR STARTED:** 1965.

**STAFF:** 5 professionals.

**MISSION:** To collect, index, extract, evaluate, store, and disseminate information on ionization and appearance potentials and electron affinities by all experimental techniques, including spectroscopic.

**SCOPE:** Ionization; atoms and atomic properties; molecules and molecular properties; gas ionization; ions; anions; heat of formation; ionized gases; energy; cations; ionization potential; electron affinity; dissociation; ionization gages; heat of reaction; ionizing radiation; physical chemistry; appearance potential; photoionization; photoelectron spectroscopy; Rydberg series; ion energy levels.

**HOLDINGS:** Complete collection of articles on ionization and appearance potentials since 1956; holdings on electron and proton affinities.

**PUBLICATIONS:** *Energetics of Gaseous Ions* (by H. M. Rosenstock and others, a monographic supplement (Supp. 1) to the *Journal of Physical and Chemical Reference Data*, Vol. 6, 1977); *A Bibliography on Ion-Molecule Reactions* (NBS Technical Note 291); *Ionization Potentials, Appearance Potentials, and Heats of Formation of Gaseous Positive Ions* (NSRDS—NBS 26; available from the Government Printing Office, Washington D.C. 20402); "The Measurement of Ionization and Appearance Potentials" (by H.M.

Rosenstock, in *Int. J. Mass Spectron Ion Phys.* 20, 139 1976); *An Annotated Bibliography on Proton Affinities* (NBSIR 76-1061).

**SERVICES:** Answers technical inquiries; provides consulting, indexing, and technical analysis and evaluation services; compiles data and bibliographies; conducts literature surveys and state-of-the-art studies; makes referrals to other sources of information.

**QUALIFIED USERS:** Anyone with professional interest in the field.

## 27

### Data Center on Atomic Line Shapes and Shifts

Optical Physics Division

Institute for Basic Standards

National Bureau of Standards

Washington, D.C. 20234

Tel: (301) 921-3374

Director: Dr. Wolfgang L. Wiese

Point of Contact: Georgia A. Martin

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data and the Optical Physics Division, National Bureau of Standards.

**YEAR STARTED:** 1970.

**STAFF:** 1 equivalent full-time professional.

**MISSION:** (1) To collect and catalog all literature relevant to the broadening and shift of atomic spectral lines, and (2) to prepare and publish bibliographies and critical reviews of various topics in atomic line broadening. The Center has published bibliographies on atomic line shapes which are updated by supplements as new literature in the field warrants. Critical reviews of well-defined topics in the atomic line broadening field and the critical evaluation and compilation of line broadening data are planned.

**SCOPE:** Instrumental broadening; pressure broadening; resonance broadening; Stark broadening; Van der Waals broadening.

**HOLDINGS:** Over 2,700 papers on line broadening and shifts copied from journals and books dating back to 1889. The collection is kept up to date by constant monitoring of the current literature through several title and abstracting journals. A reprint or copy of each article has been cataloged and filed according to a general indexing system based upon the type of broadening mechanism. Papers containing numerical data are further cataloged as to element and ionization state.

**PUBLICATIONS:** "Bibliography on Atomic Line Shapes and Shifts (1889 through March 1972)" (by J. R. Fuhr, W. L. Wiese, and L. J. Roszman; NBS Spec. Publ. 366, 1972); "Bibliography on Atomic Line Shapes and Shifts (April 1972 through June 1973)" (by J. R. Fuhr, L. J. Roszman, and W. L. Wiese; NBS Spec. Publ. 366, Suppl. 1, 1974); "Bibliography on Atomic Line Shapes and Shifts (July 1973 through May 1975)" (by J. R. Fuhr, G. A. Martin, and B. J. Specht; NBS Spec. Publ. 366, Suppl. 2, 1975); "Experimental Stark Widths and Shifts for Non-Hydrogenic Spectral Lines of Ionized Atoms (A Critical Review and Tabulation of Selected Data)" (by N. Konjevic and W. L. Wiese; J. Phys. Chem. Ref. Data 5, 259-308, 1976); "A Critical Review of the Stark Widths and Shifts of Spectral Lines from Non-Hydrogenic Atoms" (by N. Konjevic and J. R. Roberts; J. Phys. Chem. Ref. Data 5, 209-257, 1976).

**SERVICES:** Answers inquiries; provides consulting, reference, and literature-searching services; permits onsite use of collection. Services are free to all users.

**QUALIFIED USERS:** Scientists with professional interest in the field.

## 28

**Data Collection and Processing Group**  
Scripps Institution of Oceanography  
Mail Code S-001  
La Jolla, Calif. 92093  
Tel: (714) 452-4420  
Director: Arnold E. Bainbridge  
Point of Contact: George C. Anderson

**SPONSORS:** Office of Naval Research, National Science Foundation, U.S. Department of Energy, and the Marine Research Committee of the State of California.

**YEAR STARTED:** 1949.

**STAFF:** 1½ administration, 14 sea-going technicians, 5 data processing, and 1 maintenance.

**MISSION:** To collect and analyze physical and chemical oceanographic data. The Group also collects, but does not process, biological and geological samples.

**SCOPE:** Physical and chemical oceanographic data, with emphasis on the northeastern Pacific; temperature; salinity; oxygen; nutrients; chlorophyll; phytoplankton; plankton; geological cores.

**HOLDINGS:** Archive of all physical and chemical data gathered by Scripps Institution of Oceanography investigators.

**PUBLICATIONS:** *Physical and Chemical Data Report; Marine Technicians Handbook.*

**SERVICES:** Answers inquiries; provides consulting and reference services; provides duplication services at cost; distributes data compilations; conducts seminars; makes referrals to other sources of information; permits onsite use of collections.

**QUALIFIED USERS:** Anyone on a time-available basis.

## 29

**Diffusion in Metals Data Center**  
Metallurgy Division  
Institute for Materials Research  
National Bureau of Standards  
Washington, D. C. 20234  
Tel: (301) 921-3353  
Director: Dr. Daniel B. Butrymowicz

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is

supported by the Office of Standard Reference Data and the Metallurgy Division, National Bureau of Standards.

**YEAR STARTED:** 1963.

**STAFF:** 2 full-time and 4 part-time.

**MISSION:** To compile and critically evaluate data on diffusion in metals.

**SCOPE:** Diffusion in metals and their alloys; diffusion coefficients; activation energies for diffusion.

**HOLDINGS:** Data on diffusion in metals.

**PUBLICATIONS:** Five evaluated diffusion data compilations have been published in the *Journal of Physical and Chemical Reference Data*.

**SERVICES:** Answers inquiries; provides consulting services.

**QUALIFIED USERS:** U.S. government agencies and their contractors, research and educational institutions, and industry.

## 30

### DOD Nuclear Information and Analysis Center (DASIAC)

General Electric Tempo

816 State St.

Santa Barbara, Calif. 93102

Tel: (805) 965-0551 Ext. 253

Director: Warren W. Chan

**SPONSOR:** Defense Nuclear Agency (DNA).

**YEAR STARTED:** 1961.

**STAFF:** The professional staff is composed of personnel with training and experience in physics, engineering, radiation biology, and geology-soil science. The Center has a staff of 24 (17 professionals and 7 support personnel) and the part-time services of 3 or 4 consultants.

**MISSION:** To serve as the DOD focal point for

information and data on the phenomenology of nuclear detonations and effects on strategic and tactical military systems.

**SCOPE:** Nuclear weapon effects; nuclear weapon output (includes radiation and heavy particles produced as a result of fission/ fusion processes); weapon phenomena (includes shock, fireball, atmospheric ionization, TREE (Transient Radiation Effects on Electronics), and electromagnetic pulse phenomena produced by environment/nuclear weapon interactions); system effects (includes nuclear weapon effects on complete military systems, subsystems, components, and materials, as well as effects on nonmilitary installations); research facilities and instrumentation (includes techniques and hardware associated with nuclear weapon programs in blast and shock, electromagnetic, thermal, nuclear radiation, and integrated effects research).

**HOLDINGS:** Data compilations, technical reports, photos, maps, charts, project records, computer programs, conference and symposium proceedings.

**PUBLICATIONS:** State-of-the-art reviews, technical notes, handbooks, test readiness and engineering reports, computer code information, newsletters, special bibliographies and literature surveys, accession lists. Many of the publications are classified and all distribution is controlled by Headquarters, DNA.

**SERVICES:** Provides consulting and advisory services, computational support, reproduction facilities, study facilities, and reference assistance; makes materials available to qualified users; assists in organizing, announcing, and conducting seminars, workshops, and review meetings held at the Center.

**QUALIFIED USERS:** Services are available to all elements of the Department of Defense, other authorized federal agencies, and contractors, in accordance with DOD security procedures. The majority of the information retained and disseminated by the Center is classified defense information. Access to this information is available only to those individuals or organizations that have a certified need for nuclear weapons effects

information. All visitors to the Center must file suitably-endorsed visit clearance requests to DASIAC in accordance with military security procedures.

## 31

### **Earth Resources Observation System (EROS) Data Center**

U.S. Geological Survey  
Sioux Falls, S. Dak. 57198  
Tel: (605) 594-6511

Director: Allen H. Watkins  
Point of Contact: User Services Applications  
Branch

**YEAR STARTED:** 1971.

**STAFF:** Full-time staff numbers about 350 and consists of U.S. Geological Survey and contractor personnel specializing in data handling and processing, training, applications assistance, and research. Scientists/engineers work in the fields of agriculture, range, and forestry and in geology, engineering geology, mineral resources, and energy resources.

**MISSION:** To receive, catalog, store, duplicate, and distribute aircraft and spacecraft remote sensor data obtained from the Department of the Interior, NASA, Department of Defense, and other sources; to provide training and assistance in the application of remotely sensed data to resources and land use problems; to conduct research in the extraction of information from data and in the interpretation of data for natural resources and land use investigations; and to maintain a library of remote sensing publications.

**SCOPE:** The Center's areas of interest include the following: Remote sensing, aircraft data; space-acquired data; theme extraction; information systems research, development, and operation; data distribution; agriculture; forestry; energy resources; engineering site selection; geography; geology; hydrology; land use; marine resources; mineral resources; natural resources; rangelands and wildlands; water resources; and urban investigations.

**HOLDINGS:** LANDSAT imagery; NASA Earth Resources Aircraft Program photography and imagery; Skylab imagery and photography; U.S. Geological Survey, other Department of the Interior agencies, and other federal departments and agencies aerial photography and remote sensor imagery; a library of remote sensing publications; microfilm of reports of NASA, U.S. Geological Survey, and other ground and engineering investigations in support of remote sensing.

**PUBLICATIONS:** Descriptive brochures and documents.

**SERVICES:** Answers inquiries; provides information about the availability of imagery and photography, evaluation of image quality, coverage, and user assistance in the form of consultation on data interpretation and analysis or access to interpretive equipment; conducts seminars, workshops, and training courses; provides duplication services; permits onsite use of collections. Charges are made for some services and for materials used in seminars and workshops.

**QUALIFIED USERS:** No restrictions.

## 32

### **Ecological Sciences Information Center**

Information Center Complex  
Oak Ridge National Laboratory  
P.O. Box X  
Building 2029  
Oak Ridge, Tenn. 37830  
Tel: (615) 483-8611 Ext. 3-6524 or 3-6173  
(FTS) 850-6524  
Director: Helen Pfuderer

**SPONSORS:** Various divisions and offices of the Department of Energy; the Fish and Wildlife Service and Water Resources Scientific Information Center of the Department of the Interior; and the Electric Power Research Institute.

**YEAR STARTED:** 1968 (the Center was previously called Biogeochemical Ecology Information Center).

**STAFF:** 1 director; 26 information analysts (11 half-time); 4 clerical.

**MISSION AND SCOPE:** The Center provides information support in assessing the environmental impact of both nuclear and fossil energy. The sources and interactions of radionuclides in the environment, pathways to man, and effects in man and experimental animals are of concern. Information support is provided to the National Uranium Resource Evaluation Project with a computer-searchable file of annotated references to the geochemistry and geophysics of uranium. The geology of selected areas within the United States is indexed to geographic parameters. The Nevada Applied Ecology Information Center compiles the data base on the Environmental Aspects of the Transuranics and makes available a numeric data base on plutonium in animals. References and abstracts originally assembled as the basis for a comprehensive review of radionuclides in soil and uptake by plants are computer searchable. Biomedical aspects and transport of uranium and thorium in the environment as related to the thorium fuel cycle are the subject of a data base and annotated bibliography. Models used for the assessment of environmental radionuclide releases are assessed. The data base on shallow land burial of low-level radioactive waste emphasizes specific parameters affecting soil and geologic migration of radionuclides. Information on water-related environmental effects of energy technologies is analyzed for the Water Resources Scientific Information Center. Computerized information files are compiled on the environmental impact of cooling electric generating stations, including such subjects related to cooling as effects of temperature, chlorine and other chemicals, impingement, and entrainment. A predictive fish population model on the effects of power station operations on representative fish species is supported by a data base on the life history, biology, population dynamics, and trophic interactions of striped bass. Other data bases are built by the Center for the ORNL Environmental Sciences Division. The journal *Ecology* was searched from 1956 through 1977 for articles pertaining to ecosystems analysis, either subprocesses or total systems, and an annotated and indexed data base is being compiled. Information support is also

provided to the assessment of cycling of carbon in relation to global climate with an extensively indexed and annotated data base.

**HOLDINGS:** Various computer-searchable files as described above.

**PUBLICATIONS:** Reviews and/or bibliographies on thermal effects of aquatic systems and the environmental aspects of transuranics are published on a regular basis, and a number of specialized bibliographies and literature overviews are also published. The bibliographies are available from the National Technical Information Service (NTIS). A literature overview on the *Environmental, Health, and Control Aspects of Coal Conversion* was written in collaboration with the ORNL Environmental Resource Center.

**SERVICES:** Provides in-depth literature searches using computerized data bases and extensive library facilities. Searches are provided free to sponsoring agencies and their contractors; others are charged on a cost-recovery basis.

**QUALIFIED USERS:** No restrictions.

### 33

**Electrolyte Data Center**  
Physical Chemistry Division  
Institute for Materials Research  
National Bureau of Standards  
Washington, D.C. 20234  
Tel: (301) 921-3632  
Director: Dr. Bert R. Staples

**SPONSOR:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data, National Bureau of Standards.

**YEAR STARTED:** 1971.

**STAFF:** 1 full-time and 2 part-time physical chemists.

**MISSION:** To provide on a continuing basis information services, evaluations, and critical

reviews of thermodynamic data on aqueous electrolytes.

**SCOPE:** Emphasis is on the equilibrium thermodynamic properties of aqueous electrolyte systems, including organic and inorganic acids, bases, and salts. Some properties covered are internal energy (U), enthalpy (H), entropy (S), Gibbs energy (G), equilibrium constants, activity coefficients, osmotic coefficients, and density.

**HOLDINGS:** Small collection of books, reprints, and reports. The Center also has access to the files of the Chemical Thermodynamics Data Center and to the National Bureau of Standards' library.

**PUBLICATIONS:** Technical reports, data compilations, critical reviews, state-of-the-art reviews, bibliographies, directories, R&D summaries, and abstracts and indexes. Publications are sold by the publishers.

**SERVICES:** Answers inquiries; provides current-awareness (SDI) services; provides, on contract basis, compilations and critical reviews on special topics and other special services within the subject scope of the Center; permits onsite use of collection.

**QUALIFIED USERS:** Free services are available to the public and, in addition, contract services are available to government agencies and nonprofit institutions.

**YEAR STARTED:** 1960.

**STAFF:** Approximately 4 full-time and 4 part-time.

**MISSION:** To identify, acquire, and catalog technical papers on a wide spectrum of materials for selected electrical, magnetic, and optical properties and to extract data and compile state-of-the-art reports of special interest to the defense and scientific communities.

**SCOPE:** Electrical, magnetic, and optical properties of materials of value to the defense and scientific communities, including semiconductors, insulators, metals, superconductors, ferromagnetics, ferroelectrics, ferrites, electroluminescents, thermionic emitters, and laser materials.

**HOLDINGS:** 65,000 technical papers, with an annual accession rate of about 6,000.

**PUBLICATIONS:** Technical reports, directories, bibliographies, critical reviews, data compilations, state-of-the-art reviews, abstracts and indexes, books. A list of available publications is provided on request.

**SERVICES:** Answers inquiries; provides consulting, current-awareness, and reference services; provides data evaluation, retrospective literature-searching, and reproduction services on fee basis; make referrals to other sources of information.

**QUALIFIED USERS:** No restrictions.

### 34

**Electronic Properties Information Center (EPIC)**  
Center for Information and Numerical Data  
Analysis and Synthesis (CINDAS)  
Purdue University  
Purdue Industrial Research Park  
2595 Yeager Rd.  
West Lafayette, Ind. 47906  
Tel: (317) 463-1581  
(800) 428-7675 (toll free)  
Director: Dr. Y. S. Touloukian  
Point of Contact: Mr. W. H. Shafer, Associate  
Director

**SPONSOR:** Defense Logistics Agency.

### 35

**Environmental Information Division**  
OL/OOOA 3636th Combat Crew Training Wing  
Air Training Command  
Maxwell Air Force Base, Ala. 36112  
Tel: (205) 293-5373 or 293-6063  
Chief: H. Morgan Smith

**YEAR STARTED:** 1945.

**STAFF:** 4 professionals, all full-time.

**MISSION:** (1) To collect and evaluate en-

vironmental data for the Air Force, the Air Training Command survival schools, and other Department of Defense agencies, and (2) to provide guidance and support in the formulation of policies for survival education programs and research in the environmental sciences.

**SCOPE:** Geographical areas of environmental extremes and effects of extremes on Air Force survival and rescue operations, equipment, and personnel; geography, ecology, and applied biology; cross cultural contacts; applied anthropology and ethnology; human survival; emergency survival and rescue; conservation; natural areas and energy.

**HOLDINGS:** Books, research reports, abstracts, manuscripts, and geographical charts; ethnographic information on Europe, Asia, South America, Africa, and the Middle East; 35mm color slide collection on natural history and ethnology of American and Southeast Asian tropics and emergency survival education.

**PUBLICATIONS:** *Information Bulletins* and special studies containing unclassified aircrew survival and rescue information; *Cultural Briefs* containing basic, useful information on establishing friendly working rapport with peoples of different cultures; bibliographies, technical reports, state-of-the-art reviews.

**SERVICES:** Answers inquiries; provides consulting services; provides technical advisory services for motion picture production; lends some slides; permits onsite use of collection.

**QUALIFIED USERS:** DOD and other U.S. government agencies. Publications and audiovisual materials may be provided to universities and libraries for professional organizational use. All request for services should be submitted to ATC/DONZ, Randolph AFB, Tex. 78148; requests for publications should be submitted to 3636th CCTW/DAD, Fairchild AFB, Wash. 99011.

## 36

**Environmental Mutagen Information Center  
Information Center Complex**

Oak Ridge National Laboratory  
P.O. Box Y  
Building 9224  
Oak Ridge, Tenn. 37830  
Tel: (615) 483-8611 Ext. 3-5473  
Director: John S. Wassom

**SPONSORS:** National Institute of Environmental Health Sciences; National Cancer Institute; Department of Energy.

**YEAR STARTED:** 1969.

**STAFF:** 6 full-time and 3 part-time professionals.

**MISSION:** To collect, systematize, and distribute information on the mutagenesis of environmental agents.

**SCOPE:** Mutagenic effects of environmental agents (excluding radiation), primarily chemicals.

**HOLDINGS:** 20,000 documents with computerized indexing by organism, agent tested, and assay system.

**PUBLICATIONS:** Bibliographic compilations.

**SERVICES:** Provides literature searches on the testing and evaluation of specific environmental agents for mutagenicity.

**QUALIFIED USERS:** Services are provided free to the sponsoring agencies and their contractors and on a mutual information exchange basis to American, European, Japanese, and Indian environmental mutagen societies and their members.

## 37

**ERIC Clearinghouse on Adult, Career and  
Vocational Education**

Ohio State University  
Center for Vocational Education  
1960 Kenny Rd.  
Columbus, Ohio 43210  
Tel: (614) 486-3655  
Director: Dr. Marla Peterson

**SPONSOR:** Educational Resources Information

Center (ERIC) of the National Institute of Education.

YEAR STARTED: 1973.

STAFF: 4 information and library professionals; 1 management professional; 2 (full-time equivalents) abstractors and indexers; 5 clericals.

MISSION: To collect, process, analyze, and disseminate information in the fields of adult and continuing, career, and vocational-technical education.

SCOPE: Career education; adult and continuing education; vocational-technical education; life roles; career guidance and counseling; career psychology; career development; career strategy; occupational knowledge; manpower training; leisure; economics.

HOLDINGS: Full-text microfiche collection of all documents announced in *Resources in Education*.

PUBLICATIONS: Bibliographies, directories, state-of-the-art reviews, critical reviews, data compilations.

SERVICES: Answers inquiries; provides computerized literature searches for nominal fee; provides reference services and R&D information; conducts seminars and workshops; permits onsite use of collection. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022.

QUALIFIED USERS: Anyone.

## 38

### ERIC Clearinghouse on Counseling and Personnel Services

University of Michigan  
School of Education Bldg.  
Ann Arbor, Mich. 48104  
Tel: (313) 764-9492  
Director: Garry R. Walz

SPONSORS: Educational Resources Information Center (ERIC) of the National Institute of Education and University of Michigan.

YEAR STARTED: 1966.

STAFF: Director, associate director, assistant director, learning resources coordinator, user services coordinator, information specialists, executive secretary, receptionist, staff secretaries, library aides.

MISSION: To synthesize, analyze, integrate, and disseminate information relevant to a variety of personnel specialties (i.e., elementary school guidance counseling, school psychology, counseling psychology, and student personnel work). Other goals are the stimulation of increased collaboration among diverse personnel professions through the identification and analysis of a shared knowledge base, the encouragement and support of localized information centers designed to increase information diffusion, the support of research that analysis has identified as being needed, and the enhanced utilization of relevant research knowledge by specialists in helping services.

SCOPE: The Clearinghouse is responsible for acquiring, indexing, abstracting, and analyzing materials and research reports relating to the preparation, practice, and supervision of counselors and other helping professionals and non-professionals at all educational levels and in all settings. Included are materials describing theoretical developments; the use and results of personnel procedures such as testing, interviewing, and disseminating and analyzing personal and environmental information; group work and case work; and reports on program development and evaluation. The coverage also includes

materials that deal with the nature of pupil, student, and adult characteristics; descriptions of educational, occupational, rehabilitation, and community settings; and discussions of the types of assistance provided by personnel workers in areas such as education and career planning, parent and family consultations, teacher consultations, student activities, dropout identification, prevention, and rehabilitation, crisis intervention, offender rehabilitation, drug education, sex education, family living, and counseling with special population groups such as the elderly, the widowed and divorced, the disadvantaged, and women.

**HOLDINGS:** Entire ERIC collection on microfiche; literature collection of over 5,000 books, conference and research reports, and journals. The Clearinghouse also has a computer terminal with which it can search over 40 data bases, including ERIC.

**PUBLICATIONS:** Synthesis papers, monographs, bibliographies, annual newsletter, special indexes.

**SERVICES:** Provides special searches, including computer searches, for information needed to support institutional research and program development (search strategies may be negotiated by mail, phone, or in person with an Information Specialist); permits prearranged onsite group use of the collection. Other services generated through analysis activities are training programs designed to increase the effectiveness of information usage, the support of research activities which are indicated through information analysis, and the facilitation of broader information analysis activities by other groups through consultation and supportive resources. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in*

*Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022. The Clearinghouse's own services are free, except for computer searches.

**QUALIFIED USERS:** Lay people; professional educators, particularly those with an interest in the counseling and personnel area; and practitioners and researchers within the educational professions.

## 39

### **ERIC Clearinghouse on Early Childhood Education**

University of Illinois  
805 West Pennsylvania Ave.  
Urbana, Ill. 61801  
Tel: (217) 333-1386  
Director: Dr. Lilian G. Katz  
Assistant Director: Dr. Susan B. Thomas

**SPONSOR:** Educational Resources Information Center (ERIC) of the National Institute of Education.

**YEAR STARTED:** 1967.

**STAFF:** Full-time: Associate director, assistant director, 3 information specialists, and 2 clericals. Part-time: Director, 1 editor, 3 abstractor/indexers, 1 research assistant, and 3 clericals.

**MISSION:** To collect, evaluate, and disseminate information on early childhood education.

**SCOPE:** Early childhood education and development, from preschool through the primary grades; early learning and cognitive development; child rearing; curricula; teacher training; parents; community services for children; programs and models of early childhood education.

**HOLDINGS:** ERIC microfiche collection, books, papers, documents, and resource materials on early childhood education.

**PUBLICATIONS:** Newsletter, state-of-the-art reviews, bibliographies. A publications list is available.

**SERVICES:** Answers inquiries; performs computer searches of ERIC document base; conducts technical workshops; makes referrals to other sources of information; permits onsite use of collection. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022. Some of the Clearinghouse's services are provided free and others at cost.

**QUALIFIED USERS:** Anyone.

#### **40**

##### **ERIC Clearinghouse on Educational Management**

University of Oregon

Eugene, Oreg. 97403

Tel: (503) 686-5043

Director: Philip K. Piele

Point of Contact: Ruth Sickler, secretary to the Director

**SPONSOR:** Educational Resources Information Center (ERIC) of the National Institute of Education.

**YEAR STARTED:** 1966.

**STAFF:** 8 full-time and 10 part-time.

**MISSION:** To gather and disseminate knowledge about educational management and facilities and to make a rapid and reliable connection between the producers and the users of such knowledge.

**SCOPE:** Educational management, facilities, planning, and evaluation; school administration, organization, finance, construction, and building design; school law; preparation of educational ad-

ministrators; women and minorities in educational administration.

**HOLDINGS:** Complete microfiche collection of ERIC documents and a hard copy collection on educational management.

**PUBLICATIONS:** *ERIC Clearinghouse on Educational Management Newsletter*; bibliographies, critical reviews, directories, data compilations.

**SERVICES:** Answers inquiries; provides computerized information retrieval, current-awareness, reference, and consulting services; makes referrals to other sources of information; permits onsite use of collections. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022. The Clearinghouse's own services and publications are free to all users.

**QUALIFIED USERS:** Anyone.

#### **41**

##### **ERIC Clearinghouse on Handicapped and Gifted Children**

Council for Exceptional Children

1920 Association Dr.

Reston, Va. 22091

Tel: (703) 620-3660

Director: Don Erickson

Point of Contact: Joyce Aegerter

**SPONSOR:** Educational Resources Information Center (ERIC) of the National Institute of Education.

**YEAR STARTED:** 1966.

**STAFF:** Approximately 25.

**MISSION:** To acquire and disseminate information regarding the education of children for whom special methods, techniques, and materials are necessary.

**SCOPE:** Education of exceptional children, including the neglected and abused, the intellectually gifted, the mentally retarded, the sensory handicapped (blind, partially seeing, deaf, hard of hearing), the speech handicapped, and others whose learning problems are related to neurological, emotional, or multiple handicapping conditions; the administration of special education services and the preparation and continuing education of professional personnel working in this area.

**HOLDINGS:** Collection of about 25,000 items, including abstracts, reports, curriculum guides, conference proceedings, journal articles, textbooks, and other documents with an index in machine-readable form.

**PUBLICATIONS:** Bibliographies; information analysis products.

**SERVICES:** Answers inquiries; provides reference and literature-searching services; makes referrals to other sources of information; permits onsite use of collection. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022.

**QUALIFIED USERS:** Anyone engaged in or interested in the education of handicapped and gifted children.

**42**

**ERIC Clearinghouse on Higher Education**

The George Washington University

1 Dupont Circle NW., Suite 630

Washington, D.C. 20036

Tel: (202) 296-2597

Director: Dr. Jonathan D. Fife

Point of Contact: Ms. Marilyn Shorr

**SPONSOR:** Educational Resources Information Center (ERIC) of the National Institute of Education.

**YEAR STARTED:** 1968.

**STAFF:** 4 information specialists/writers; 1 editor; 2 indexers/abstractors; 2 management/clerical.

**MISSION:** To collect, process, and disseminate literature related to the field of higher education and to produce literature reviews or state-of-the-art papers on critical issues in higher education.

**SCOPE:** College and university students, curriculum, financing, governance, faculty, and administration; graduate and professional education; interinstitutional arrangements; institutional research.

**HOLDINGS:** Complete microfiche collection of ERIC documents and hard copies of documents on higher education submitted to *Resources in Education*.

**PUBLICATIONS:** *ERIC/Higher Education Research Reports* and *Research Currents* (prepared by the Clearinghouse and published by the American Association for Higher Education).

**SERVICES:** Answers inquiries; provides consulting, reference, literature-searching, and duplication services; conducts workshops; permits onsite use of collection. Like other ERIC clearinghouses, ERIC/Higher Education abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy

or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022. A fee is charged for some services provided by the Clearinghouse.

QUALIFIED USERS: Anyone.

### 43

#### **ERIC Clearinghouse on Information Resources**

School of Education

Syracuse University

Syracuse, N.Y. 13210

Tel: (315) 423-3640

Director: Donald P. Ely

Point of Contact: W. Bruce Clark

SPONSOR: Educational Resources Information Center (ERIC) of the National Institute of Education.

YEAR STARTED: 1974.

STAFF: 9 full-time equivalents.

MISSION: To provide the educational community with up-to-date information and access to materials in the fields of educational media and technology and library and information science.

SCOPE: The Clearinghouse acquires and processes documents on research, development, delivery, and evaluation of information and instructional technology. It focuses on personnel, personnel development, strategies, systems, procedures, materials, and equipment used in the fields of information and education. Current areas include: libraries; learning resource centers; information science; instructional design, development, and evaluation; systems analysis; community information systems; and instructional media, as well as strategies that flow from these topics, e.g., information transfer, mastery learning, simulation and gaming, programmed instruction, individualized instruction, and information brokering. The

Clearinghouse is also concerned with the delivery of information and instruction through media such as television, computers, radio, films, microforms, holography, and other audiovisual devices.

HOLDINGS: A complete collection of ERIC microfiche and a specialized collection of copyrighted material and journals in the fields of educational technology, libraries, and information science.

PUBLICATIONS: State-of-the-art papers, bibliographies, informational brochures.

SERVICES: Answers inquiries; conducts workshops; distributes publications; makes referrals to other sources of information; permits onsite use of collections. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022.

QUALIFIED USERS: Anyone.

### 44

#### **ERIC Clearinghouse for Junior Colleges**

University of California

Powell Library Bldg., Room 96

405 Hilgard Ave.

Los Angeles, Calif. 90024

Tel: (213) 825-3931

Director: Dr. Arthur M. Cohen

Point of Contact: Ms. Bonnie Sanchez

SPONSOR: Educational Resources Information Center (ERIC) of the National Institute of Education.

**YEAR STARTED:** 1966.

**STAFF:** 2 full-time and 4 part-time professionals; 3 full-time support personnel.

**MISSION:** (1) To collect fugitive and published documents pertinent to all phases of community/junior college education; (2) to select materials from this collection for announcement in ERIC's monthly abstract bulletin; and (3) to analyze, synthesize, and disseminate pertinent information through Clearinghouse publications.

**SCOPE:** All print materials relevant to community/junior college education, including studies of students, staff, curricula, administration, and organization.

**HOLDINGS:** Approximately 3,000 documents.

**PUBLICATIONS:** Regular columns in four education journals: *New Directions for Community Colleges*, *Community College Frontiers*, *Community College Review*, and *Community/Junior College Research Quarterly*; directories, books, bibliographies, state-of-the-art reviews.

**SERVICES:** Answers inquiries; provides consulting and reference services; provides R&D information; distributes publications; makes referrals to other sources of information; conducts manual searches of the collection on request; permits onsite use of collection. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022. The Clearinghouse's own services are free.

**QUALIFIED USERS:** Anyone.

**45**

**ERIC Clearinghouse on Languages and Linguistics (ERIC/CLL)**

Center for Applied Linguistics  
1611 North Kent St.

Arlington, Va. 22209

Tel: (703) 528-4312

Director: Peter A. Eddy

Associate Director: Alice C. Omaggio

**SPONSOR:** Educational Resources Information Center (ERIC) of the National Institute of Education.

**YEAR STARTED:** 1966.

**STAFF:** 4½ information and library professionals; 1½ management professionals; 3 clerical and nonprofessionals.

**MISSION:** To collect and disseminate information in the general area of research and application in languages, linguistics, and language teaching and learning.

**SCOPE:** Foreign language education; psycholinguistics and psychology of language learning; theoretical and applied linguistics; bilingualism and bilingual education; English as a second/foreign language; uncommonly taught languages.

**HOLDINGS:** About 30,000 titles on foreign language pedagogy and linguistics; 200 periodical descriptions; and 120,000 titles on microfiche.

**PUBLICATIONS:** *CAL-ERIC/CLL Series on Language and Linguistics* (includes articles published in professional journals, joint publications with other professional societies, short papers and extensive papers—approximately 15-20 titles a year); minibibliographies; brochures; bulletins; articles about Clearinghouse accessions, activities, and services in state and national foreign language journals.

**SERVICES:** Information is disseminated by ERIC/CLL in six ways: (1) by acquiring, selecting, abstracting, and indexing documents of significant quality in its field for the ERIC

microfiche collection and the monthly abstract journal *Resources in Education*; (2) by indexing and annotating journal articles for the monthly ERIC journal *Current Index to Journals in Education*; (3) by commissioning and publishing state-of-the-art papers and selective bibliographies on current issues in language and linguistics; (4) by conducting workshops at professional meetings; (5) by answering inquiries; and (6) by offering computer searches of the ERIC data base.

**QUALIFIED USERS:** No restrictions.

## 46

### **ERIC Clearinghouse on Reading and Communication Skills**

National Council of Teachers of English  
1111 Kenyon Rd.

Urbana, Ill. 61801

Tel: (217) 328-3870

Director: Dr. Bernard O'Donnell

**SPONSORS:** Educational Resources Information Center (ERIC) of the National Institute of Education and National Council of Teachers of English.

**YEAR STARTED:** 1967.

**STAFF:** Full-time: Director, assistant director, documents coordinator, 2 editors, and 3 secretaries. Part-time: 3 associate directors, coordinator of user services, 2 research associates, 1 editor, and 5 abstractors.

**MISSION:** To collect, analyze, evaluate, and disseminate education information related to research, instruction, and personnel preparation at all levels and in all institutions concerned with instruction in reading, English, journalism, speech, theatre, and television/radio.

**SCOPE:** Administratively, the Clearinghouse is organized into three modules. The *Reading Module* is responsible for educational information as it applies to all aspects of reading—cognitive, affective, and psychomotor—and to professional training, research methodology, and organization of instruction. Particular attention is given to

documents dealing with identification and diagnosis of the individual's reading ability and the appropriate recommendations of materials dealing with the improvement of reading. The *English/Journalism Module* is responsible for educational information related to teaching and learning and native language, both as a symbol system and as it is related to speaking, listening, writing, and reading. This module is also responsible for educational journalism, including the learning and teaching of the creation, analysis, interpretation, and evaluation of journalism in print, electronic media, graphics, advertising and public relations, and the training of teachers at all levels. The *Speech Communication Module* is responsible for educational information related to radio/film/TV, forensics, interpersonal and small group interaction, theatre, oral interpretation, rhetorical and communication theory, public address, and speech sciences.

**HOLDINGS:** Reports, research papers, conference papers, books, periodicals, instructional materials.

**PUBLICATIONS:** Analyses of research, bibliographies, state-of-the-art papers, and other information analysis products. Regular ERIC columns appear in *Elementary English*, *English Journal*, *Reading Teacher*, *Journal of Reading*, and *Speech Teacher*.

**SERVICES:** Answers inquiries; provides reference, literature-searching, and duplication services; permits onsite use of collection. Like other ERIC clearinghouses, ERIC/RCS abstracts and indexes research documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022. The Clearinghouse's own services are free.

**QUALIFIED USERS:** Anyone.

**47**

**ERIC Clearinghouse on Rural Education and Small Schools**

New Mexico State University, Box 3AP  
Las Cruces, N. Mex. 88003

Tel: (505) 646-2623

Director: Dr. Everett D. Edington

Point of Contact:

Dr. Carroll Hall, Associate Director

Betty Rose D. Rios, Acquisitions

Denise Marie DeVale, Information Specialist

**SPONSOR:** Educational Resources Information Center (ERIC) of the National Institute of Education.

**YEAR STARTED:** 1966.

**STAFF:** Director, associate director, assistant director, information specialist, editor, 2 abstractors, computer programmer, 4 secretaries, 2 file clerks.

**MISSION:** To acquire, index, abstract, store, retrieve, and disseminate significant research and resource documents within the scope areas described below. There is a concentration on the acquisition of documents that have limited distribution and accessibility through normal dissemination and retrieval channels.

**SCOPE:** The Clearinghouse is responsible for information on organization, administration, curriculum, instruction, innovative programs, other aspects, and all levels of: American Indian education, education in small schools, Mexican-American education, migrant education, outdoor education, and rural education.

**HOLDINGS:** Collection of monographs, research reports, curriculum guides, journal articles, commercial publications, and resource materials, with emphasis on items that have limited distribution and accessibility through normal dissemination and retrieval channels. The Clearinghouse is also equipped to search the entire ERIC files, including *Resources in Education* and

*Current Index to Journals in Education* data bases, via computer.

**PUBLICATIONS:** Bibliographies, state-of-the-art papers, interpretive summaries of research, research synthesis papers, and occasional news briefs are prepared and disseminated by the Clearinghouse. A publications list is available.

**SERVICES:** Answers inquiries pertaining to the use of the ERIC system in general as well as ERIC/CRESS itself; provides consultation services on the establishment and use of information centers; permits onsite use of collection for indepth research; conducts workshops; performs computer searches of ERIC files. Like other ERIC clearinghouses, ERIC/CRESS abstracts and indexes research documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022. The Clearinghouse's own services are free, except for computer searches.

**QUALIFIED USERS:** All interested persons.

**48**

**ERIC Clearinghouse for Science, Mathematics, and Environmental Education**

Ohio State University

1200 Chambers Rd.

Columbus, Ohio 43212

Tel: (614) 422-6717

Director: Dr. Robert W. Howe

**SPONSORS:** Educational Resources Information Center (ERIC) of the National Institute of Education and Ohio State University.

**YEAR STARTED:** 1966.

**STAFF:** Director; 3 associate directors; 6 research associates (specialists in science, environmental, and mathematics education); administrative assistant; 5 secretaries and technical assistants.

**MISSION:** To acquire, process, and disseminate research reports and other documents relating to the teaching and learning of science, mathematics, and the environment.

**SCOPE:** The Clearinghouse acquires research reports, instructional materials, curriculum guides, directories, and other materials related to science, mathematics, and environmental education. Included are materials concerned with all levels of formal education and also nonformal education.

**HOLDINGS:** Collection of research reports, periodicals, books, and curriculum and instructional materials, both print and nonprint.

**PUBLICATIONS:** Bulletins, state-of-the-art papers, bibliographies, research reviews, program directories, instructional materials, indexes. Publications may be purchased from the SMEAC Information Reference Center, 1200 Chambers Rd., 3rd Floor, Columbus, Ohio 43212.

**SERVICES:** Answers inquiries; provides limited reference and literature-searching services; makes referrals to other sources of information. The assistance provided depends upon the time available for such work or contracted searches. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022.

**QUALIFIED USERS:** Researchers, teachers, curriculum development personnel, supervisors, and administrators in formal and nonformal education setting.

## 49

### **ERIC Clearinghouse for Social Studies/Social Science Education**

855 Broadway  
Boulder, Colo. 80302

Tel: (303) 492-8434

Director: Dr. Irving Morrisett

Associate Director: Dr. James E. Davis

**SPONSORS:** Educational Resources Information Center (ERIC) of the National Institute of Education and the Social Science Education Consortium, Inc.

**YEAR STARTED:** 1970.

**STAFF:** Approximately 10 full-time.

**MISSION:** To serve the information needs of those concerned with social science education and the social studies within the guidelines and functions of the ERIC system.

**SCOPE:** All aspects of social science and social studies education, including the behavioral sciences, history, and ethics, from kindergarten through the adult level; anthropology, archaeology, demography, economics, geography, political science, sociology, and social science education.

**HOLDINGS:** ERIC microfiche collection; collection of books, periodicals, reports, games, social studies project materials, supplementary materials, and textbooks.

**PUBLICATIONS:** Newsletter (annual), state-of-the-art papers, bibliographies, reviews, and tips for teachers.

**SERVICES:** Answers inquiries; provides reference services; conducts computer searches of ERIC and other data bases; distributes publications; makes referrals to other sources of

information; permits onsite use of collections. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022. The Clearinghouse's own services are free, except for computer searches.

**QUALIFIED USERS:** Anyone.

## 50

### **ERIC Clearinghouse on Teacher Education**

American Association of Colleges for Teacher Education  
1 Dupont Circle NW., Suite 615  
Washington, D.C. 20036  
Tel: (202) 293-7280  
Director: Dr. Karl Massanari

**SPONSORS:** Educational Resources Information Center (ERIC) of the National Institute of Education; American Association of Colleges for Teacher Education; Association of Teacher Educators; National Education Association; and American Alliance for Health, Physical Education, and Recreation.

**YEAR STARTED:** 1968.

**STAFF:** 9 full-time and 5 part-time.

**MISSION:** To acquire, evaluate, abstract, index, store, retrieve, and disseminate information on significant and up-to-date documents on vital aspects of teacher education, health education, physical education, and recreation education; to generate materials that are needed in the field, including monographs, state-of-the-art papers, bibliographies, and other work; and to provide

evaluated information rapidly and inexpensively in order to improve American education.

**SCOPE:** Preparation and development of teacher educators, primarily in the United States but also internationally, including recruitment, selection, lifelong professional development, and placement; preservice and inservice preparation of school personnel and supporting personnel at the nursery, elementary, and secondary levels; teaching as a profession; selected aspects of health education, physical education, and recreation education.

**HOLDINGS:** Library.

**PUBLICATIONS:** Two series: *Special Current Issues Publications* (SCIPs) and *Bibliographies on Educational Topics* (BETS); annual newsletter; directories, state-of-the-art reviews, brochure. A list of recent publications is available.

**SERVICES:** The Clearinghouse provides information about the ERIC system and how to use it, disseminates publications, makes referrals to other sources of information, and permits onsite use of its collection. It also performs, for a fee, computer searches of the ERIC data base on topics within the scope of the Clearinghouse. Like other ERIC clearinghouses, it abstracts and indexes research documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022.

**QUALIFIED USERS:** Anyone.

## 51

### **ERIC Clearinghouse on Tests, Measurement, and Evaluation**

Educational Testing Service

Rosedale Rd.  
Princeton, N.J. 08540  
Tel: (609) 921-9000  
Point of Contact: Eleanor V. Horne, Assistant  
Director

**SPONSOR:** Educational Resources Information Center (ERIC) of the National Institute of Education.

**YEAR STARTED:** 1970.

**STAFF:** 5 professionals, 1 administrative assistant, 3 secretaries.

**MISSION:** To acquire significant educational literature within the area of measurement, evaluation, and research design and methodology; select quality materials; process (i.e., catalog, index, and abstract) the selected items for input to the data base; and provide information analysis products and various user services related to the data base.

**SCOPE:** Educational tests and other measurement instruments; evaluation procedures, techniques, and materials (in general and for specific projects and programs); research design and methodology; experimental design; educational accountability; measurement techniques; statistical design; personality assessment; psychological testing; psychometrics; statistics; observation techniques; learning theory and human development.

**HOLDINGS:** The Clearinghouse maintains a complete microfiche collection of ERIC documents and has access to a retrieval system that allows it to search *Resources in Education* and *Current Index to Journals in Education* data bases via computer.

**PUBLICATIONS:** *TM Report* series, consisting of interpretive summaries, research reviews, and bibliographies on critical topics in education (available free from the Clearinghouse as long as the supply lasts; also available at cost in hard copy or microfiche from the ERIC Document Reproduction Service).

**SERVICES:** The Clearinghouse provides in-

formation about the ERIC system and how to use it, assists in the preparation of search strategies, and uses its computer-access capability to prepare small, focused bibliographies. The ERIC microfiche collection may be used onsite. Like other ERIC clearinghouses, ERIC/TM abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription from Macmillan Information, 866 Third Ave., New York, N.Y. 10022.

**QUALIFIED USERS:** Anyone.

## 52

### **ERIC Clearinghouse on Urban Education**

Teachers College, Columbia University  
525 West 120th St.  
New York, N.Y. 10027  
Tel: (212) 678-3437  
Director: Dr. Edmund Gordon  
Assistant Director: Jean Marzone  
Point of Contact: Dr. Erwin Flaxman, Associate  
Director

**SPONSOR:** Educational Resources Information Center (ERIC) of the National Institute of Education.

**YEAR STARTED:** 1965.

**STAFF:** Director; associate director; assistant director; 1 reference/technical processing librarian; 1 acquisitions assistant; 2 abstractor/indexers; 1 user services assistant; 1 editor.

**MISSION:** To collect, maintain, and disseminate information about urban and minority children and youth.

**SCOPE:** The education of Blacks, Puerto Ricans, Asian Americans, Caribbean immigrants, and other urban ethnic and national groups; the academic, intellectual, and social performance of urban minority children and youth from grade three through college entrance; effects of urban and minority experiences and environments from birth onward; programs and practices that provide learning experiences designed to meet the needs of diverse populations served by urban schools and which build upon their unique as well as their common characteristics; structural changes in the classroom, school, school system, and community and innovative instructional practices that directly affect urban minority children and youth; issues, programs, and practices related to ethnic and economic discrimination, segregation, and integration in education; issues, programs, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

**HOLDINGS:** Approximately 17,000 documents on the education of urban and minority children and youth; ERIC microfiche collection of approximately 138,000 documents on all areas of education.

**PUBLICATIONS:** *IRCD Bulletin* (4 times a year); *ERIC/CUE Urban Disadvantaged Series*, *ERIC/CUE Doctoral Research Series*, and *ERIC/CUE Equal Opportunity Review* (all occasional).

**SERVICES:** Answers inquiries; provides consulting, reference, and literature-searching services; conducts seminars; distributes publications; makes referrals to other sources of information; permits onsite use of collections. Like other ERIC clearinghouses, the Clearinghouse abstracts and indexes documents within its areas of interest for announcement in ERIC's monthly abstract bulletin, *Resources in Education*, which is sold by the Superintendent of Documents, Government Printing Office. Most documents cited in *Resources in Education* can be obtained in hard copy or microfiche from the ERIC Document Reproduction Service, P.O. Box 190, Arlington, Va. 22210. It also indexes and annotates journal articles for the *Current Index to Journals in Education*, which is available by subscription

from Macmillan Information, 866 Third Ave., New York, N.Y. 10022. The Clearinghouse's own services are free, except for computer searching of the ERIC data base.

**QUALIFIED USERS:** Anyone.

## 53

### **Gamma-Ray Spectrum Catalogue**

**Idaho National Engineering Laboratory**

**EG&G Idaho, Inc.**

**P.O. Box 1625**

**Idaho Falls, Idaho 83401**

**Tel: (208) 526-4447**

**Director: R. L. Heath**

**SPONSOR:** The Catalogue is affiliated with the National Standard Reference Data System and is supported by the Division of Reactor Research and Technology of the Department of Energy.

**YEAR STARTED:** 1958.

**STAFF:** 8 part-time Ph.D.-level physicists, 2 data clerks, and 2 computer specialists.

**MISSION AND SCOPE:** To measure basic experimental data on gamma-ray spectra of radionuclides using NaI (Tl) scintillation spectrometers and Ge(Li) solid-state gamma-ray spectrometers to obtain experimental spectra and gamma-ray energies and intensities and to publish this information in the form of graphs with pertinent experimental data as the *Gamma-ray Spectrum Catalogue*. This information is augmented with publications on gamma-ray spectrometry techniques and precision measurement techniques for obtaining extremely precise values for gamma-ray energies and intensities.

**HOLDINGS:** A vast collection of experimental gamma-ray spectra of radioactive nuclides obtained with all types of scintillation and solid-state gamma-ray spectrometers. The data is obtained in one laboratory to provide consistency.

**PUBLICATIONS:** *Scintillation Spectrometry Gamma-ray Spectrum Catalogue* (2-volume compilation published as AEC Report No. IDO-

16880, available from the National Technical Information Service); *Gamma-ray Spectrum Catalogue-Ge(Li) Spectrometers* (published as AEC Report No. ANCR-1000); state-of-the-art reviews, data compilations, books, technical reports, standards and specifications.

**SERVICES:** Answers inquiries; provides consulting services in gamma-ray spectrometry and in the area of experimental physics instrumentation used in gamma-ray spectrometry; provides reference services and R&D information; permits onsite use of collection. Services are free within the ability and availability of staff.

**QUALIFIED USERS:** No limitations.

## 54

### **Health and Environmental Studies Program (HESP)**

Information Center Complex  
Oak Ridge National Laboratory  
P.O. Box X  
Building 7509  
Oak Ridge, Tenn. 37830  
Tel: (615) 483-8611 Ext. 3-1433  
Manager: Anna S. Hammons

**SPONSORS:** National Science Foundation, Environmental Protection Agency, and the Department of Energy.

**YEAR STARTED:** 1973.

**STAFF:** 2 full-time and 1 part-time professionals. Additional professionals are assigned as needed.

**MISSION:** To provide to the scientific community environmentally-oriented monographs on toxic substances.

**SCOPE:** Toxic substances, including production and use, chemical and physical properties, metabolism, and physiological, toxicological, environmental, and ecological effects.

**HOLDINGS:** Literature acquired for use in preparation of reviews. HESP also uses the data bases of ORNL's Information Center Complex.

**PUBLICATIONS:** State-of-the-art reviews and critical reviews. Publications are sold through the National Technical Information Service.

**SERVICES:** Prepares state-of-the-art reviews.

**QUALIFIED USERS:** Program sponsors.

## 55

### **Health and Safety Analysis Center**

Mining Enforcement and Safety Administration  
U.S. Department of the Interior  
P.O. Box 25367, Denver Federal Center  
Denver, Colo. 80225  
Tel: (303) 234-4271  
Chief: Donald K. Walker

**YEAR STARTED:** 1972.

**STAFF:** 67 engineers, statisticians, mathematicians, computer specialists, and clerks.

**MISSION:** To collect accident/injury/illness and employment reports required by law from the mineral industries and compile and publish annual and quarterly recurring reports on the data; to make data analyses on high injury frequency occupations and produce special publications for distribution; and to answer queries of MESA administrators, the Congress, industry, labor, and other government offices.

**SCOPE:** National surveys and analyses of injury and worktime experience of all minerals industries.

**HOLDINGS:** Accident-injury-illness-worktime data on 16mm microfilm collected from all mining operations in the United States since 1972 for coal mine operations and since 1973 for noncoal mine operations (prior years are in archival storage) consisting of an estimated 200,000 reports per year.

**PUBLICATIONS:** Safety Reviews on coal (monthly) and metal and nonmetal (quarterly) mine injuries, fatalities, and worktime; other data compilations and analytical reports.

**SERVICES:** Answers inquiries and distributes publications at cost.

**QUALIFIED USERS:** Government offices, the Congress, mining industry, and union personnel. Files are public information.

## 56

### **High Pressure Data Center**

574 H.B.L.L.

Brigham Young University

Provo, Utah 84602

Tel: (801) 374-1211 Ext. 2322

Director: Dr. H. Tracey Hall

Point of Contact: Dr. Leo Merrill

**SPONSOR:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data, National Bureau of Standards.

**YEAR STARTED:** 1965.

**STAFF:** 1 geophysicist and 1 secretary, both full-time; 1 student part-time.

**MISSION:** To evaluate numerical data relative to high pressure phases of the elements and compounds, including melting curves and solid-solid phase transformation pressures.

**SCOPE:** All pressure studies from 1 kilobar up to the megabar range.

**HOLDINGS:** Papers on high pressure research published since 1900, including translations from Russian and German; a bibliography of these papers on punched cards and magnetic tape, indexed by author and subject.

**PUBLICATIONS:** *Bibliography on High Pressure Research* (6 issues a year, sold on subscription basis); *High Pressure Bibliography 1900-1968*; *High Pressure Bibliography 1968-1971*; critical reviews on pressure scale and PVT data.

**SERVICES:** Answers inquiries; provides literature-searching services; provides duplication services for fee; permits onsite use of collection.

**QUALIFIED USERS:** Anyone with a need to know.

## 57

### **Information Center for Energy Safety (ICES)**

Oak Ridge National Laboratory

P.O. Box Y

Oak Ridge, Tenn. 37830

Tel: (615) 483-8611 Ext. 3-5453  
(FTS) 850-5453

Director: William B. Cottrell

Assistant Director: Harry C. Hoy

**SPONSOR:** Division of Environmental Impact of the Department of Energy.

**YEAR STARTED:** 1976.

**STAFF:** 2 full-time professionals and 1 non-professional.

**MISSION:** To provide a means for collecting, storing, evaluating, and disseminating relevant safety information essential to the development and use of various forms of energy.

**SCOPE:** Safety considerations and relevant standards in the design, construction, and operations of the various energy systems and their supportive research facilities. Particular emphasis is given to the various energy options that DOE is developing, exclusive of nuclear (the safety of which is covered by the Nuclear Safety Information Center). These include solar, coal, coal liquification, oil, gas, and shale technology, magnetohydrodynamics, thermonuclear, geothermal, wind electrical energy systems, transportation and storage, and advanced systems.

**HOLDINGS:** Collection of documents; computerized data base on RECON.

**PUBLICATIONS:** State-of-the-art reports, topical bibliographies, regular journal articles appearing in the National Safety Council's Research and Development Newsletter.

**SERVICES:** Answers technical inquiries; provides technical consultation services; prepares

retrospective bibliographies on request; permits onsite use of collection.

**QUALIFIED USERS:** DOE and its direct contractors are provided free service. Others are also provided free service, within the Center's budget and/or staff limitations, where the potential for information exchange exists.

## 58

### **Information Center for Internal Exposure**

Health and Safety Research Division

Oak Ridge National Laboratory

Oak Ridge, Tenn. 37830

Tel: (615) 483-8611 Ext. 3-1165 or 3-1481

Director: S. R. Bernard

**SPONSOR:** Division of Biomedical and Environmental Sciences of the Department of Energy.

**YEAR STARTED:** Original work started in 1948; formally established in 1965.

**STAFF:** Director, plus assistance from the Health and Safety Research Division as required.

**MISSION AND SCOPE:** Estimation of dose received from internally deposited radionuclides; calculation of maximum permissible concentrations of radionuclides in air, water, and food; body-burden calculations; analysis of information relevant to metabolic questions involved in estimating internal exposure.

**HOLDINGS:** About 5,000 abstracts of published reports and some unpublished reports.

**SERVICES:** Answers inquiries on topics within the Center's scope; conducts literature searches; prepares data compilations; supplies information and interpretations to the committees on the Internal Dose of the International Commission on Radiological Protection (ICRP) and the National Council on Radiation Protection and Measurement (NCRP).

**QUALIFIED USERS:** Services are primarily for government agencies, their contractors, and offi-

ficial radiological protection committees, but inquiries from other sources are honored as workload permits.

## 59

### **Infrared Information and Analysis Center (IRIA)**

Environmental Research Institute of Michigan

P.O. Box 8618

Ann Arbor, Mich. 48107

Tel: (313) 994-1200 Ext. 214

Director: Dr. George J. Zissis

Point of Contact: Mildred F. Denecke, Manager

**SPONSORS:** Defense Logistics Agency and Office of Naval Research with support from the three military services and DARPA. Additional support is received through an annual subscription plan from other U.S. government agencies and contractors.

**YEAR STARTED:** 1954.

**STAFF:** 4 full-time technical (physics and engineering) and 5 clerical. In addition, 30 to 40 technical staff members of the Institute's Infrared and Optics Division are available as needed.

**MISSION:** To collect, analyze, and disseminate information on infrared technology, with special emphasis on the military applications.

**SCOPE:** Infrared sources; atmospheric effects; characteristic radiation from natural and man-made objects; optical properties of materials; infrared detection materials and elements; laboratory components and techniques; infrared spectra; lasers and masers; military electro-optics and infrared systems.

**HOLDINGS:** About 26,000 items, including government-sponsored research and development reports, journal articles, and some patents (bibliographic information for these items is stored on magnetic tape). A library of reference books and bound journals supplements this collection.

**PUBLICATIONS:** *IRIA Annotated Bibliography* (annual); *Proceedings of the Infrared*

*red Information Symposium (Proc IRIS)* and minutes of proceedings of the specialty groups of IRIS; *The Infrared Newsletter* (for qualified subscribers only). These publications bear a security classification. The Center also issues state-of-the-art reports, which may be either classified or unclassified.

**SERVICES:** Provides subscribers with references to scientific and technical documents on request and information concerning current research and development projects; may provide substantive answers to specific inquiries; conducts symposia, including the biennial Department of Defense conference on laser technology. The Center provides a rate schedule of service charges.

**QUALIFIED USERS:** Subscribers, including Department of Defense organizations and their contractors with appropriate security clearance and demonstrated need-to-know, except for requests in unclassified areas. Requests for permission to visit the Center should be addressed to the Security Office of the Environmental Research Institute of Michigan at the above address.

## 60

**Institute of Polar Studies**  
Ohio State University  
125 South Oval Mall  
Columbus, Ohio 43210  
Tel: (614) 422-6531  
Director: David H. Elliot

**SPONSORS:** National Science Foundation, Department of the Army, Department of Energy, Department of State, and the National Geographic Society.

**STAFF:** Full-time: 15 administrative and research specialists. Part-time: 20 to 30 researchers, both senior and graduate students, with specialties in various branches of earth and biological sciences.

**MISSION:** (1) To plan, encourage, support, and direct significant scientific research in polar phenomena; (2) to bring together or develop interrelated polar investigations and teams of in-

vestigators; (3) to seek and to facilitate the training of research workers devoted to polar studies; and (4) to make available to scientists and the public the fruits of significant polar studies.

**SCOPE:** Polar regions of the earth, particularly the Antarctic continent, the Glacier Bay area of southeast Alaska, northern Alaska, Patagonia, Tierra del Fuego, Andean Peru, and the southwest of Greenland; glaciology-geophysics; bedrock geology; glacial geology; climatology; lichenology; bacteriology; phycology; soil movement; Eskimo archeology; ice physics.

**HOLDINGS:** A special collection of International Geophysical Year glaciological record sheets for Greenland and Antarctica; a collection of color slides of Greenland, Alaska, Argentina, Chile, Peru, and Antarctica; books, journals, reports, maps, data files, pamphlets, reprints; Antarctica rock specimens and ice cores; herbarium of Alaskan and Greenland flora; Antarctic lichen and plant fossil collections.

**PUBLICATIONS:** *Institute of Polar Studies Report Series* (irregular).

**SERVICES:** Answers inquiries; provides consulting, reference, and literature-searching services; makes referrals; lends some materials; conducts seminars and workshops; permits onsite use of collections. Reports issued by the Institute and a Contribution series are distributed to scientific personnel and exchanged with other libraries. Fees may be charged for extensive services.

**QUALIFIED USERS:** No restrictions.

## 61

**International Demographic Statistics**  
Population Division  
Bureau of the Census  
Washington, D.C. 20233  
Tel: (301) 763-2834  
Chief: Samuel Baum  
Point of Contact: Martha Bargar

**SPONSOR:** Agency for International Development.

**YEAR STARTED: 1968.**

**STAFF:** 24 professional and clerical. Professional staff specialties are in the fields of demography and statistics, with some emphasis also on information gathering and computer usage.

**MISSION:** To maintain an up-to-date collection of demographic information for all the developing countries of the world; conduct demographic research with primary emphasis on the evaluation and analysis of basic data; prepare computer programs for the evaluation and analysis of demographic data; prepare estimates of a variety of demographic parameters for all countries of the world and more detailed data for selected individual countries for publication and/or for informal distribution; and represent the Bureau of the Census in international statistical activities.

**SCOPE:** Current and some historical worldwide demographic data with emphasis on the developing countries.

**HOLDINGS:** A Demographic Data Retrieval System containing approximately 30,000 tables of demographic information on microfilm coded for easy retrieval by subject, country or geographic area, and date or time period.

**PUBLICATIONS:** Series of Country Demographic Profiles and International Research Documents (published periodically); *World Population* reports (biennial series).

**SERVICES:** Responds to requests for specific items of demographic information for the developing countries of the world and, in selected cases, evaluates and analyzes data or makes population projections on request, depending on the availability of time and resources in relation to other project priorities.

**QUALIFIED USERS:** Anyone.

**62**

**JILA Atomic Collisions Information Center**  
Joint Institute for Laboratory Astrophysics  
(JILA)

**University of Colorado**  
**Boulder, Colo. 80302**

**Tel:** (303) 499-1000 Ext. 3649 or 492-7801  
**Director:** Dr. E. C. Beaty (on leave)  
**Acting Director:** Dr. J. R. Rumble

**SPONSORS:** The Center is part of the National Standard Reference Data System and is jointly sponsored by the National Bureau of Standards and the University of Colorado.

**YEAR STARTED: 1960.**

**STAFF:** Full-time: 4 physicists and 1 clerical. Half-time: 1 mathematician and 1 clerical.

**MISSION AND SCOPE:** To collect, evaluate, and distribute data on collisions of electrons, photons, atoms, and molecules, with primary emphasis on data needed for modeling high temperature (ionized) gases.

**HOLDINGS:** The bibliographic collection contains about 10,000 items. Numerical data is collected from the papers and stored in digital form on magnetic tape. Critical reviews are made of selected data fields.

**PUBLICATIONS:** Quarterly newsletter of bibliography of energy transfer collisions.

**SERVICES:** Answers inquiries; prepares and distributes tabulations of numerical data in response to needs for modeling ionized gases.

**QUALIFIED USERS:** Scientists and engineers in relevant areas of research and development.

**63**

**Machinability Data Center**  
Metcut Research Associates Inc.  
3980 Rosslyn Dr.  
Cincinnati, Ohio 45209  
**Tel:** (513) 271-9510  
**Director:** Dr. John F. Kahles

**SPONSOR:** The Center is operated by Metcut Research Associates Inc. under contract to the Department of Defense, Defense Logistics Agency, with technical aspects being monitored by the

**U.S. Army Materials and Mechanics Research Center.**

**YEAR STARTED:** 1964.

**STAFF:** 7 machining data analysts (3 full-time and 8 part-time); 3 systems and data processing personnel (full-time); 1 librarian (full-time); 1 user/inquiry controller (full-time); and 1 management (full-time).

**MISSION:** To collect, evaluate, store, and disseminate specific and detailed machining information with the aid of a computerized data processing system.

**SCOPE:** Specific and detailed machining data for all types of materials and for all kinds of material removal operations such as turning, milling, drilling, tapping, grinding, electrical discharge machining, electrochemical machining, etc., with strong emphasis on engineering evaluation for the purpose of developing optimized material removal parameters such as speeds, feeds, depths of cut, tool material and geometry, cutting fluids, and other significant variables; product safety and reliability as influenced by the surface preparation of critical structures that have been subjected to material removal.

**HOLDINGS:** Over 32,000 evaluated documents that can be retrieved specifically by content using a computerized system.

**PUBLICATIONS:** "Machining Briefs" (bi-monthly newsletter distributed free to MDC users); NCECO (NC ECOnomics) (computer program, 1973); Programmable Calculator Strips for HP-65 and HP-67/97 (1976); *Machining Data Handbook* (2d ed., 1972); *Machining: A Process Checklist* (1976); *Nontraditional Machining Guide* (1976); *Chemical Machining* (1977); *Group Technology* (1976); *Machining of High Strength Steels with Emphasis on Surface Integrity* (1970); *Determination and Analysis of Machining Costs and Production Rates Using Computer Techniques* (1968); *1968 Supplement to Machining Data for Numerical Control; Grinding Ratios for Aerospace Alloys* (1966); *Machining Data for Beryllium Metal* (1966); *Machining Data for Titanium Alloys* (1965).

**SERVICES:** Answers inquiries; provides consulting, reference, literature-searching, abstracting and indexing, and reproduction services; provides R & D information; conducts seminars; lends materials; makes referrals to other sources of information; permits onsite use of collection. Answers to inquiries that can be handled quickly over the phone are provided free; other services are provided on a fee basis.

**QUALIFIED USERS:** Anyone, with certain limitations in foreign dissemination.

## 64

### **Mechanical Properties Data Center (MPDC)**

Battelle Memorial Institute

Columbus Laboratories

505 King Ave.

Columbus, Ohio 43201

Tel: (614) 424-5892

Manager: Harold Mindlin

Point of Contact: Ross Gubiotti, Information Services Officer, or Harold Husik, Publications Officer

**SPONSOR:** Defense Logistics Agency, with the Army Materials and Mechanics Research Center as technical monitor.

**YEAR STARTED:** 1960.

**STAFF:** 3 professionals.

**MISSION:** To acquire, analyze, store, and disseminate information and data on the mechanical properties of structural materials for Department of Defense application and uses in the aerospace and defense industries.

**SCOPE:** Mechanical properties of structural materials, interacting variables, and associated information, with major emphasis on metal alloys test data. Data on more than 4,600 specific alloys are stored in the system, including detail on tensile strength, creep compressive strength, fracture toughness, yield, elongation, shear strength, etc., and reported variables such as heat treatment, melt practice, pre-test conditioning, surface finishing, test methods, and environmental data.

**HOLDINGS:** About 7 million mechanical properties data points (a data point is defined as a single value for a given property), with approximately 3,000 test results being added to the collection each month; 1.5 million punched cards; 3,000 specifications; 2,400 manufacturers' and producers' data sheets; 45,000 technical reports; 600 texts and references.

**PUBLICATIONS:** *Aerospace Structural Metals Handbook* (5 vols.) and *Structural Alloys Handbook* (2 vols.) (both updated annually); *MPDC Alloy Cross-Index* (2 vols.); *MPDC Inventory Reports* (irregular); bibliographies.

**SERVICES:** Provides complete data displays in answer to specific questions, including related variables and bibliographic information, as well as supplemental references to scientific or technical documents; prepares computer-printed graphic and tabular displays; provides information concerning current research and development projects; prepares special bibliographies on request; renders technical evaluation of the accuracy, quality, and/or significance of information. Graphical presentations and analysis capabilities are available. All users are charged a nominal fee to defray a small portion of the service costs. The Center also offers all or selected portions of the data file and software to users who wish to manipulate the data in-house; periodic data update service is also available.

**QUALIFIED USERS:** Department of Defense, NASA, other U.S. government agencies, the aerospace and defense industries, and organizations or individuals requiring mechanical properties data.

**SPONSOR:** Department of Defense, Office of Director of Defense, Research and Engineering, under a Defense Logistics Agency contract monitored by the Army Materials and Mechanics Research Center.

**YEAR STARTED:** 1955.

**STAFF:** 100 part-time professional technicians (20 percent); 7 full-time professional technicians; 4 full-time information specialists; and 10 full-time typing and clerical.

**MISSION:** To provide technical assistance and information on materials within the Center's scope, with emphasis on applications to the defense community.

**SCOPE:** *Metals:* Titanium, aluminum and magnesium, beryllium, refractory metals, high-strength steels, superalloys (primarily nickel- and cobalt-base alloys), and rhenium and vanadium.

*Ceramics:* Borides, carbides, carbon/graphite, nitrides, oxides, sulfides, silicides, intermetallics, selected glasses and glass-ceramics, and other materials mutually agreed upon by the contractor and the government. Composites of these materials; coatings; environmental effects; mechanical and physical properties; materials applications; test methods; sources, suppliers, and specifications; design characteristics; processes used in basic materials production; primary and secondary fabrication; joining; powder processes; surface treatment; quality control and inspection.

**HOLDINGS:** Reports on government-sponsored research, journals, patents, data, trade literature, books.

**PUBLICATIONS:** A biweekly Current Awareness Bulletin summarizing significant developments in technology related to the technical scope of the Center and containing news items covering pertinent information on timely technical meetings, R&D contract awards, and new technical literature; a variety of engineering reports and handbooks related to the utilization of advanced metals and ceramics. The reports and handbooks are available at cost from the Center or from the National Technical Information Service, Springfield, Va. 22151.

## 65

**Metals and Ceramics Information Center (MCIC)**  
Battelle Memorial Institute  
Columbus Laboratories  
505 King Ave.  
Columbus, Ohio 43201  
Tel: (614) 424-5000 (general information)  
424-6376 (technical inquiry service)  
424-4425 (director)  
Director: Harold Mindlin

**SERVICES:** Answers inquiries; provides consulting, reference, literature-searching, current-awareness, and abstracting and indexing services; provides information on R&D in progress; analyzes data; distributes reports, handbooks, and data compilations; undertakes special studies utilizing the Center's technical resources to provide in-depth timely responses to the unique needs of the Center's users; makes referrals to other sources of information; permits onsite use of collections.

**QUALIFIED USERS:** The Current Awareness Bulletin is available to corporate organizations having a registered Defense Documentation Center User Code and located in the United States; other services are available to anyone on a cost-incurred basis (an estimate is provided).

## **66**

**Michigan Memorial-Phoenix Project**  
University of Michigan  
North Campus  
Ann Arbor, Mich. 48109  
Tel: (313) 764-6213  
Director: William Kerr, Ph.D.

**SPONSOR:** The U.S. Department of Energy provides support for the Project's fuel acquisition program, spent fuel shipment, reactor sharing program with other educational institutions, and supply of heavy water.

**YEAR STARTED:** 1948.

**STAFF:** 22.

**MISSION AND SCOPE:** To encourage and support research in the peaceful uses of nuclear energy and the implications of this form of energy.

**HOLDINGS:** Facilities include a radiation laboratory and two-megawatt research reactor. The neutron activation analysis equipment is computer based and nuclear reactor calculations are performed by computer. The Project also has ready access to a depository collection of USAEC

publications maintained by the University's library system.

**PUBLICATIONS:** R&D summaries, annual report, reprints. Back issues of *Phoenix*, a periodical formerly published by the Project, are also available.

**SERVICES:** Answers inquiries; provides consulting, current-awareness, reproduction, and irradiation services; provides information on research in progress; provides data compilations for specific studies; analyzes data; distributes publications; conducts seminars; prepares radio-compounds; makes direct and interlibrary loans; makes referrals to other sources of information; permits onsite use of literature collection. Information and library services are usually free to all users; consulting and analytical services may be free to other educational institutions if funds permit; services to medical and industrial organizations are made according to a rate schedule.

**QUALIFIED USERS:** No restrictions.

## **67**

**Molecular Spectra Data Center**  
Optical Physics Division  
Institute for Basic Standards  
National Bureau of Standards  
Washington, D.C. 20234  
Tel: (301) 921-2024  
Director: Frank J. Lovas

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data and the Optical Physics Division, National Bureau of Standards.

**YEAR STARTED:** 1967.

**STAFF:** 1 scientist full-time and 2 scientists part-time.

**MISSION:** To publish evaluated tabulations of microwave and infrared absorption lines.

**SCOPE:** Microwave and infrared spectra molecules and the physical properties derived therefrom (rotational constants, etc.).

**HOLDINGS:** Data on microwave and infrared spectra of gases.

**PUBLICATIONS:** Data tabulations are published in the *Journal of Physical and Chemical Reference Data* (a citations list is available).

**SERVICES:** Answers inquiries.

**QUALIFIED USERS:** Scientists with a professional interest.

*Equilibrium Type Cells* (Vol. 2 of a series, NSR-DS-NBS 28); *Molten Salts: Nitrates, Nitrites, and Mixtures* (Vol. 3 of a series, published in the *Journal of Physical and Chemical Reference Data*, Vol. 1, No. 3); *Molten Salts Handbook* (1969); bibliographies, state-of-the-art reviews, data compilations, technical reports.

**SERVICES:** Answers inquiries; provides consulting, current-awareness, and reference services; conducts seminars and workshops. Services are provided on a cost basis.

**QUALIFIED USERS:** No limitations.

## 68

**Molten Salts Data Center**  
Rensselaer Polytechnic Institute  
Troy, N.Y. 12181  
Tel: (518) 270-6344  
Director: Dr. George J. Janz

**SPONSOR:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data, National Bureau of Standards.

**YEAR STARTED:** 1965.

**STAFF:** Director and postdoctorate and predoc torate co-workers with specialties in fused salts, physical properties, and electrochemistry.

**MISSION:** To critically evaluate data on molten salts, provide continuing literature searches, and generally upgrade the information now available.

**SCOPE:** Inorganic compounds in the molten state; electrical conductance; viscosity; density; surface tension; emf (formation cells). Extension to additional properties is foreseen.

**HOLDINGS:** Data.

**PUBLICATIONS:** *Molten Salts: Electrical Conductance, Density and Viscosity Data* (Vol. 1 of a series, NSRDS-NBS 15); *Molten Salts: Electrochemistry—Gibbs Free Energies from*

## 69

**National Center for Analysis of Energy Systems**  
Department of Energy and Environment  
Brookhaven National Laboratory  
Building 475  
Upton, Long Island, N.Y. 11973  
Tel: (516) 345-2064  
(FTS) 664-2064  
Director: Dr. K. C. Hoffman

**SPONSORS:** Department of Energy and the Electric Power Research Institute.

**YEAR STARTED:** 1976.

**STAFF:** 86 scientists, professionals, and support personnel. The staff includes expertise in the areas of science, technology, economics, planning, health and safety, information systems, and quantitative analysis.

**MISSION:** To conduct detailed studies of the complex interrelationships between technological, economic, social, and environmental factors that influence energy policy.

**SCOPE:** Energy policy; economic analysis; environmental quality; energy conservation; regional studies; developing countries' energy supply; technology assessment.

**HOLDINGS:** Computerized data bases in energy, economic, and environmental fields, including the Energy Model Data Base, County

Energy Data Base, and Brookhaven Energy System Optimization Model. The Energy Systems Library contains approximately 1,600 books, 7,500 reports, and 100 periodical titles.

**PUBLICATIONS:** Technical reports, journal articles.

**SERVICES:** Answers inquiries; makes direct and interlibrary loans; makes referrals to other sources of information; permits onsite use of collections. Services are free.

**QUALIFIED USERS:** All scientific and technical personnel concerned with energy systems.

70

National Center for Education Statistics

## **U.S. Department of Health, Education, and Welfare**

**400 Maryland Ave. SW., Room 3001  
Washington, D.C. 20202**

Tel: (202) 245-8704

**Director: Mrs. Marie D. Eldridge, Administrator**

**SPONSOR:** Office of the Assistant Secretary for Education (ASE).

**YEAR STARTED:** 1965 (assigned by statute to ASE in 1974).

STAFF: 179.

**MISSION:** To collect, collate, and report full and complete statistics on the condition of education in the United States; to prepare and publish specialized analyses of the meaning and significance of such statistics; to cooperate and assist in programs of state and local education agencies in the improvement and automation of their statistical and other information systems; to review and report on educational activities in foreign countries; and to review and control the acquisition of statistical data by the Education Division and the HEW Office for Civil Rights to minimize the data reporting burden on respondents.

**SCOPE:** Statistics on the finances and staff at all levels of education; the census and general characteristics of educational institutions and related organizations and entities; enrollments and courses and programs offered; assessments of educational progress; completions and other outputs; and participation in education by persons of various language backgrounds and racial/ethnic heritage and by handicapped persons.

**HOLDINGS:** A complete collection of the Center's more than 50 recurring publications. Selected data from the Center and Bureau of the Census and Office of Education are also available in computerized form.

**PUBLICATIONS:** *Digest of Education Statistics* (annual); *Projections of Education Statistics* (annual); *Preprimary Enrollment* (periodic); *Statistics of State Senior Systems Staff and Finances* (biennial); *Education Directory: Public School Systems* (annual); *Fall Enrollment in Higher Education and in Earned Degrees Conferred* (annual); *Statistics of Instructional Personnel* (annual); *Universities* (annual); *Postsecondary Schools and Schools with Occupational Training* (annual); *Projects, Programs, and Activities* (biennial); *Directory of Secondary Schools*; *Data Tapes* (annual); *Statistical Abstract* (annual reports, analysis of data from various sources); *Statistical Abstract of the United States* (annual); *Social Indicators* (annual); *State Progress* (biannual); *The People's Index* (annual); *Index of Documentaries* (quarterly); *Books in Print* (quarterly).

**SERVICES.**—Serves as a clearinghouse on major topics of interest to the public, provides personal consultation services, monitors and analyzes the availability of educational statistics, develops and distributes publications on all aspects of educational programs, maintains a series of handbooks, distributes selected papers, publications, reports, and presentations, compiles and disseminates educational statistics, analyzes data for trends and implications, provides computer analysis of data

**QUALIFIED USERS** U.S. Department of

Health, Education, and Welfare and other federal, state, and local governmental agencies, the education community, and the general public.

Standardized data tapes are available for purchase.

**QUALIFIED USERS:** Unlimited.

## 71

### National Center for Health Statistics

Health Resources Administration  
U.S. Public Health Service  
3700 East West Highway  
Hyattsville, Md. 20782  
Tel: (301) 435-7016  
Director: Dorothy P. Rice

**SPONSOR:** Health Resources Administration, Public Health Service.

**YEAR STARTED:** 1960.

**STAFF:** Professional staff includes such specialties as statisticians, mathematical statisticians, physicians, dentists, demographers, and sociologists.

**MISSION:** To collect, analyze, and disseminate general purpose vital and health statistics and to develop programs in health, demographic, and related statistics to serve present and future needs of all segments of health and related professions.

**SCOPE:** Vital and health data in such areas as natality, mortality, marriage and divorce, morbidity, nutrition, disability, and use of health services. Data are obtained from several continuing national data collection systems utilizing household interviews, health examinations, hospital records, and surveys of health facilities and manpower. The Center also has an active international statistical program.

**HOLDINGS:** Statistical data, some on computer tapes.

**PUBLICATIONS:** *Vital Statistics of the United States* (annual); *Monthly Vital Statistics Report*; *Vital and Health Statistics Series* (13 series).

**SERVICES:** Answers requests for data; provides consulting services to foreign, state, and local health officials in the field of health statistics.

## 72

### National Clearinghouse for Mental Health Information

Division of Scientific and Public Information  
National Institute of Mental Health  
5600 Fishers Lane  
Rockville, Md. 20857  
Tel: (301) 443-4517  
Chief: Mrs. Carrie Lee Rothgeb

**SPONSOR:** National Institute of Mental Health.

**YEAR STARTED:** 1963.

**STAFF:** 12 professionals and 15 nonprofessionals.

**MISSION:** To provide a central coordinated source of information on all aspects of mental health and illness by the collection, storage, retrieval, and dissemination of information derived from the scientific and professional literature and all other salient sources.

**SCOPE:** Mental health aspects of affective disorders, aging, alcohol, biochemistry and metabolism, children and youth, crime, environment, service organization and delivery, epidemiology, group processes, learning, minority groups, neuroses, psychometrics, psychopharmacology, reactive disorders, schizophrenia, sexology, suicide, treatment, and violence.

**HOLDINGS:** An on-line file of about 160,000 abstracts, updated at the rate of 2,000 to 3,000 abstracts per month. Over 1,200 journals from 42 countries and in 21 different languages (including Far Eastern materials) are routinely scanned for input to the data base. These are screened, cataloged, indexed, and coded for over 50 substantive areas for retrieval purposes. Coverage is also augmented through input of information from books, workshops, conference proceedings, legislation, and such other sources as *Dissertation*

*Abstracts* and nonprint materials, the latter including abstracts of films, video tapes, cassettes, and records.

**PUBLICATIONS:** *Abstracts of the Standard Edition of Freud; Abstracts of the Psychoanalytic Study of the Child*, Vols. 1-25; *Mental Health Directory; Bibliography on Racism; An Annotated Bibliography on Mental Health in the Schools; The Mental Health of Rural America; Guide to Mental Health Education Materials; It's Good to Know about Mental Health; A Consumer's Guide to Mental Health Services.*

**SERVICES:** Answers scientific and public inquiries; provides consultation on mental health information; provides technical assistance to complementary and other information resources; prepares abstract publications, syntheses, and evaluations of materials in the data base and encourages the preparation of critical reviews and state-of-the-art papers for dissemination; distributes NIMH publications and operates the NIMH Library; makes referrals to other sources of information.

**QUALIFIED USERS:** Individuals or organizations engaged in research, practice, or administration in the field of mental health, and the general public.

## 73

### National Climatic Center (NCC)

Federal Bldg.  
Asheville, N.C. 28801  
Tel: (704) 258-2850 Ext. 683  
Director: Daniel B. Mitchell

**SPONSOR:** Environmental Data Service, National Oceanic and Atmospheric Administration.

**YEAR STARTED:** 1951.

**STAFF:** Approximately 330 employees in the following occupational skills: meteorologists (climatologists), some of whom are also statisticians; meteorological technicians; mathematicians; draftsmen and illustrators;

photographers and photographic equipment specialists; geographers; electronic technicians; digital computer systems operators and programmers; electronic accounting machine project planners and machine operators; keypunch machine operators; office machine operators; printers; and clerical and other support personnel. Academic achievements among the professional staff extend to the doctorate and postdoctorate levels. NCC has the scientific and technical staff to make any type of climatological investigation, provided sufficient data of the kinds needed are available for the geographical area of concern.

**MISSION:** To archive meteorological records collected by U.S. government agencies throughout the world, principally the National Weather Service, Air Force, and Navy; to build an international data base through data acquisition programs; and to make climatological data available in suitable form for use in research and in making decisions involving strategy, time, and money.

**SCOPE:** The Center collects, quality controls, summarizes, publishes, and archives on a routine and continuing basis the original weather records produced by U.S. government agencies throughout the world and by cooperative observers on land, on sea, and in the aerospace. It also conducts research and development in the environmental sciences, in computer techniques, and in data management as assigned or approved by the Environmental Data Service.

**HOLDINGS:** The Center maintains a repository for copies of the international data base and summaries thereof, including punched cards and magnetic tapes, microfilm copies of analyzed synoptic maps, selected autographic traces of various elements and original manuscript observational forms, radar and selected satellite films, unpublished data tabulations, and publications containing climatological data for the United States and its territories.

**PUBLICATIONS:** User publications include, among others: *Climatological Data—National Summary* (monthly and annual); *Local Climatological Data* (monthly and annual for principal cities or airports); *Climatological Data*

(monthly and annual, by states); *Monthly Climatic Data for the World; Daily Series, Synoptic Weather Maps, Northern Hemisphere Sea Level*, and *500 Millibar Charts* (an historic series, with a volume published every month); *Storm Data* (monthly); bibliographies on the climate of, and climatic maps for, various areas of the world (available from the National Technical Information Service); *Climates of the States; World Weather Records* (published each decade); and *Climatic Atlas of the United States*.

**SERVICES:** Distributes routinely prepared climatological data publications and data summaries; reproduces original observational records and/or special data summaries; and prepares data summaries to meet requester's detailed specifications. Except for relatively minor requests, services are performed on a reimbursable basis.

**QUALIFIED USERS:** Any individual or private or governmental organization, both foreign and domestic.

## 74

### National Environmental Satellite Service

National Oceanic and Atmospheric Administration

Washington, D.C. 20233

Tel: (301) 763-7190

Director: David S. Johnson

**SPONSOR:** National Oceanic and Atmospheric Administration.

**YEAR STARTED:** 1958.

**STAFF:** 653 full-time, including 360 professionals (meteorologists, mathematicians, engineers, and physical scientists in several specialties).

**MISSION:** To operate the national operational environmental satellite system.

**SCOPE:** Daily worldwide sensing of environmental parameters from satellites. This in-

cludes global cloud cover and atmospheric sounding twice daily, half-hourly—day and night—imaging over most of the western hemisphere, collection of environmental data from remotely located instruments, and worldwide monitoring of solar proton activity.

**HOLDINGS:** Visible, infrared, and radiation data transmitted by environmental satellites.

**PUBLICATIONS:** Catalogs of satellite data (periodically); bibliography of articles published by staff members (revised annually).

**SERVICES:** Provides worldwide cloud cover images, atmospheric soundings, wind measurements, and sea surface temperature and sea ice data to national and international forecast services; provides hourly images and interpretation directly to U.S. weather forecast offices for immediate and short-range storm, flood, and wave warnings; provides environmental data to the Civil Air Patrol and Coast Guard to support their search and rescue operations; disseminates data collected from remotely located instruments to national and international users; provides satellite meteorological data to national and international agricultural interests for use in pest control and crop assessment; operates the Automatic Picture Transmission (APT) service to provide local satellite imagery to those worldwide users equipped with suitable receivers.

**QUALIFIED USERS:** Principal users are the various U.S. meteorological services, but foreign meteorological services and university and other research units also make considerable use of the Service's products.

## 75

### National Geophysical and Solar-Terrestrial Data Center

Environmental Data Service, NOAA

Boulder, Colo. 80302

Tel: (303) 499-1000 Ext. 6215

Director: A. H. Shapley

Point of Contact (for solar terrestrial physics): J. Virginia Lincoln, Ext. 6323

**Point of Contact (for solid earth sciences): H. Meyers, Ext. 6521**

**YEAR STARTED:** Some components and services of the Center date from 1957 and earlier; they were consolidated in 1972.

**STAFF:** 101 physicists, geophysicists, geologists, oceanographers, technicians, and data clerks, as well as an administrative staff.

**MISSION:** To collect, organize, archive, catalog, disseminate, lend, and publish worldwide solar-terrestrial physics and solid earth data. The Center also operates the World Data Center A for Solar-Terrestrial Physics and the World Data Center A for Solid Earth Sciences.

**SCOPE:** Seismology; earthquakes; geomagnetism; marine geology and geophysics; bathymetry; gravity; volcanology; earth tides; terrestrial heat flow; tsunamis; recent crustal movement; solar and interplanetary phenomena; ionospheric phenomena; solar flare-associated events; aurora; cosmic rays; airglow.

**HOLDINGS:** Major collections of solar-terrestrial and solid earth data from worldwide observatory networks and marine geophysical and geological data from hundreds of cruises. The comprehensive data collections began about 1957 (IGY), but some extend back to 1900 and earlier. Major collections are seismograms, magnetograms, ionograms, all-sky camera photographs, solar flare patrol films, data tabulations, and the archives of the Upper Mantle Project.

**PUBLICATIONS:** *Ionospheric Data* and *Solar-Geophysical Data* (both monthly); *U.S. Earthquakes* (annual); special data reports (irregular); catalogs of archived data, mainly by geographical site and time of measurement, and indexes of similar data archived elsewhere.

**SERVICES:** Answers inquiries; assists scientists in obtaining data; lends and reproduces data; reformats some of data received into digital form; provides consulting and reference services; conducts seminars and workshops; makes referrals to other sources of information; permits onsite use

of collections. Services are provided to users at cost of reproduction or on an exchange basis.

**QUALIFIED USERS:** No restrictions.

## 76

### **National Geothermal Information Resource**

Lawrence Berkeley Laboratory

University of California

Berkeley, Calif. 94720

Tel: (415) 843-2740 Ext. 5818

Point of Contact: S. L. Phillips

**SPONSOR:** Department of Energy.

**YEAR STARTED:** 1974.

**STAFF:** 1 management; 2 technical specialists; 5 professionals.

**MISSION:** To act as the focal point for the collection, organization, and dissemination of geothermal information and data. The Resource screens the world literature on a continuing basis, retrieves and indexes papers relevant to the thermodynamic and transport properties of aqueous electrolyte solutions (e.g., NaCl, silica), extracts the numerical data, and carries out critical evaluation leading to the publication of tables and status of data reviews. Emphasis is on extraction of numerical data needed for the development and utilization of geothermal energy resources.

**SCOPE:** Geothermal science and technology, including physical chemistry, exploration, utilization, environmental effects, and institutional considerations; reservoir engineering; basic scientific data.

**PUBLICATIONS:** *Compilation of Geothermal Information*; *Geothermal Subsidence* (review); technical reports, standards, critical reviews, abstracts, indexes, bibliographies, data compilations.

**SERVICES:** Answers inquiries; provides literature-searching, abstracting, and indexing services; analyzes data; distributes data compilations; makes referrals to other sources of in-

formation. Services are provided free to DOE personnel and its contractors and for a fee to others.

**QUALIFIED USERS:** No restrictions.

## 77

### National Meteorological Center (NMC)

National Weather Service, NOAA

5200 Auth Rd.

Camp Springs, Md. 20033

Tel: (301) 763-8016

763-8097 (Forecast Division)

763-8155 (Extended Forecast Division)

347-4950 (Aviation Weather Forecast)

Director: Dr. Frederick G. Shuman

**SPONSOR:** National Oceanic and Atmospheric Administration.

**YEAR STARTED:** 1958.

**STAFF:** 100 meteorologists, 17 mathematicians, and 163 technicians, all full-time.

**MISSION AND SCOPE:** To collect worldwide weather data on a continuous time schedule, process these data using both manual and computer techniques into meteorological analyses describing the current state of the atmosphere from the surface to about 100,000 feet, and produce weather predictions describing the atmosphere's expected future state for periods out to one month in advance.

**PUBLICATIONS:** *Numerical Weather Prediction Activities* (annual); technical reports, R&D summaries.

**SERVICES:** Distributes weather data analyses and forecasts to National Weather Service field offices and other domestic and foreign users; conducts research aimed at improving all of the Center's products, with emphasis on numerical weather prediction.

**QUALIFIED USERS:** U.S. government meteorologists, both civilian and military; private meteorologists such as industrial consultants, airline forecasters, university researchers, and

newscasters; and international meteorological services, including the World Meteorological Centers at Moscow and Melbourne.

## 78

### National Nuclear Data Center

Brookhaven National Laboratory

Building 197

Upton, Long Island, N.Y. 11973

Tel: (516) 345-2902

Director: Dr. Sol Pearlstein

The Center was formerly known as the National Neutron Section Center.

**SPONSORS:** Division of Reactor Research and Technology and Division of Basic Energy Sciences of the Department of Energy are the primary sponsors.

**YEAR STARTED:** 1967 (continuation of activities started in 1951).

**STAFF:** 12 physicists, 7 other professionals, and 10 other persons, all full-time.

**MISSION AND SCOPE:** (1) To collect and disseminate bibliographic, experimental, and evaluated information for neutron, charged particle, nuclear structure, and radioactive decay data for basic and applied research, including information for use primarily in reactor design, neutronics calculations, and nuclear physics studies, and (2) to develop new methods of cross-section analysis whereby theoretical and empirical models are used to parameterize the experimental data.

**HOLDINGS:** (1) The CSISRS (Cross Section Information Storage and Retrieval System) library in computerized form containing all experimentally-measured neutron cross sections; (2) EXFOR, containing experimental neutron and charged particle reaction data obtained through international exchange; (3) the Evaluated Nuclear Data File (ENDF) in computerized form containing complete (experimental and theoretical) values recommended for applied scientific use and such information as radioactive decay data,

photon interaction data, and charged particle data; (4) the computerized index to neutron data (CINDA) bibliography; (5) computerized index to integral charged particle reaction data; and (6) computerized file of nuclear structure and radioactive decay data (ENDSF obtained from the ORNL Nuclear Data Project).

**PUBLICATIONS:** Compilations of cross section data; Evaluated Nuclear Data File (ENDF) reports; newsletters, bibliographies.

**SERVICES:** Answers specific inquiries for tabulated data with output in tape, computer card, printout, microfiche, or graphic form; acquires and distributes, on request, digital computer cross section libraries made up by Center personnel and by other reactor physics groups.

**QUALIFIED USERS:** Services are generally available at cost to anyone in the United States and Canada. Experimental data and selected evaluated data are also available outside the United States through cooperating neutron data centers.

climatological, and biological data as related to oceanography. Coverage is worldwide.

**HOLDINGS:** (1) Standard digital data include mechanical and expendable bathythermograph data; oceanographic station data for surface and serial depths giving values of temperature, salinity, and oxygen for all stations and also including inorganic phosphate, total phosphorus, nitrate nitrogen, nitrite nitrogen, silicate silicon, and pH for many of the stations; continuously recorded salinity-temperature-depth data; surface current data obtained by using drift bottles or calculated from ship set and drift; biological data giving values of plankton standing crop, chlorophyll concentrations, and rates of primary productivity; and data from about 20 environmental buoys. (2) Other data holdings, also in digital format, consist of discrete files of data obtained from total environmental surveys from specialized programs in the continental shelf and offshore areas of the United States such as the Outer Continental Shelf Environmental Assessment Program (OCSEAP) in Alaskan waters or the Marine Ecosystem Analysis (MESA) studies of the New York Bight and the Puget Sound areas; from specialized programs such as the International Decade of Ocean Exploration (IDOE) that includes among its subprograms studies of environmental quality, environmental forecasting, seabed assessment, and living resources; and other data sets forwarded by independent investigators. (3) The EDS Environmental Data Index (ENDEX) that provides rapid, automated referral to over 8,500 environmental data files held by NOAA or other federal agencies, state and local governments, universities and other research institutions, and private industries. ENDEX references all types of environmental data, including pollution, solar-terrestrial physics, meteorology, biology, oceanography, and geology. References to ENDEX include each parameter measured in a given data file, the geographic area, the data storage media, the person to contact, and the costs of obtaining the actual data. (4) A file on microfilm of papers in marine biology (over 30,000) indexed in depth in a Biology Information Retrieval System (BIRS) that has now been discontinued, and a technical reports file containing over 50,000 re-

## 79

### National Oceanographic Data Center (NODC)

Environmental Data Service, NOAA

Page Bldg. No. 1

2001 Wisconsin Ave. NW.

Washington, D.C. 20235

Tel: (202) 634-7500

Director: Robert V. Ochinero

Point of Contact: Albert M. Bargeski, Chief,  
Oceanographic Services Branch

**YEAR STARTED:** 1961.

**STAFF:** 108, including oceanographers, computer specialists-programmers, technicians, and administrative support personnel.

**MISSION:** To acquire, process, store, and retrieve oceanographic data and serve as a central, national repository for this data.

**SCOPE:** Physical, chemical, marine

ports pertinent to marine sciences, particularly physical/chemical oceanography, received from foreign and domestic government, academic, and private institutions. (5) Collocated with and under the administrative aegis of the NODC is the World Data Center-A (WDC-A) for Oceanography responsible, according to guidelines established by the International Council of Scientific Unions (ICSU), for the archiving and exchanging of international oceanographic data. Holdings of WDC-A include all aspects of marine data; processing of standard, oceanographic station data is done by the NODC and incorporated into the NODC data base as well as the WDC-A files.

**PUBLICATIONS:** Marine Science Technical reports, bibliographies, atlases, data compilations, and manuals for processing oceanographic data. Of particular interest are the *User's Guide to NODC's Data Services*, *Computer Programs in Marine Science*, and the bi-monthly *Mariners Weather Log*. Publications of WDC-A for Oceanography include a *Catalog of Data* with frequent amendments and a *Catalog of Accessioned Publications* issued at regular intervals.

**SERVICES:** NODC services include: data processing; data reproduction, including computer printouts, punched cards, magnetic tapes, and other forms; analyses and preparation of statistical summaries based on archive holdings; evaluation of various data records for user's specific requirements; referrals to organizations holding requested information; provision of general marine sciences information; supply of publications, including data processing manuals, catalogs of holdings, data reports, and atlases; and onsite liaison services available from representatives located at La Jolla, Calif., Miami, Fla., Woods Hole, Mass., Seattle, Wash., and Anchorage, Alaska. Requests for data should define data desired, geographic limits involved, and such other pertinent information as a description of the problem for which the data are required. They should also specify format—magnetic tape, punched cards, microfilm, or hard copy (computer printouts, publications, analog charts). Cost varies with amount of material, special analysis, computer time, and other factors. Requests for small amounts of information are filled free;

otherwise, a cost estimate is given before work begins. NODC also provides marine data management services for special projects such as the Outer Continental Shelf Environmental Assessment Program (OCSEAP).

**QUALIFIED USERS:** Anyone.

## 80

### National Space Science Data Center

Goddard Space Flight Center  
Code 601

Greenbelt, Md. 20904  
Tel: (301) 982-6695  
Director: Dr. James I. Vette

**SPONSOR:** National Aeronautics and Space Administration.

**YEAR STARTED:** 1965.

**STAFF:** 15 professionals in space science disciplines, 14 professionals in computer and library sciences, and 43 administrative, technical, clerical, and support personnel.

**MISSION:** To provide the means for further analysis and dissemination of satellite experimental space science data beyond that provided by the analyses, presentations, and publications of principal investigators and their co-workers.

**SCOPE:** Data relating to all natural phenomena occurring in space outside the earth's lower atmosphere. Subjects include astronomy, ionospheres, cosmic rays, trapped radiation, magnetospheric plasma, solar plasma, planetary atmospheres, solar physics, X-ray astronomy, gamma ray astronomy, meteorology, planetary and lunar sciences, solar cosmic rays, geomagnetism, celestial mechanics, electric fields, and cosmic dust.

**HOLDINGS:** Data from 650 space science experiments on 28,000 magnetic tapes, 3.3 million feet of microfilm, and 2 million feet of photographic film.

**PUBLICATIONS:** *Spacewarn* (bulletin); sounding rocket launch report; data catalog of satellite experiments; models of the trapped radiation environment; Satellite Situation Center Report; various outputs from computer information files concerning 2,400 satellites, 2,700 space science experiments, and 8,400 rockets.

**SERVICES:** Answers inquiries; provides consulting and reference services; provides duplicate copies of reduced or analyzed experimental data obtained by satellites; provides predictions of positions of satellites in magnetospheric coordinate systems, including the magnetic foot track; makes referrals to other sources of information; permits onsite use of collections. Most services are provided on a reimbursable basis, but modest requests for data or services are provided free to qualified users.

**QUALIFIED USERS:** Professional interest in performing analyses with space science data, colleges and universities interested in using data and space photographs for educational purposes, museums, and planetariums.

## 81

**Nondestructive Testing Information Analysis Center (NTIAC)**  
Southwest Research Institute  
P.O. Drawer 28510  
San Antonio, Tex. 78284  
Tel: (512) 684-5111 Ext. 2361  
Director: Dr. Richard T. Smith

**SPONSOR:** Defense Logistics Agency.

**YEAR STARTED:** 1961.

**STAFF:** 3 technical professionals and 1 administrative assistant.

**MISSION:** To collect, maintain, and disseminate information in the field of nondestructive testing. Information is collected from technical reports, the open literature, and other sources and is stored in a computerized retrieval system for rapid service to users.

**SCOPE:** Nondestructive testing methodology and instrumentation, including testing by radiography, electromagnetics, ultrasonics, optics, and other methods; testability data on metals, nonmetals, composites, and specific components; quality and reliability assessment data (defect characterization, standards, serviceability criteria).

**HOLDINGS:** Collection of reference materials on nondestructive testing in hard copy and microfiche. The Center also has on-line access to the computerized files of the Defense Documentation Center and various commercially-available computerized bibliographic data bases.

**PUBLICATIONS:** Bibliographies, handbooks, data books, state-of-the-art summaries, critical reviews, and technology assessments. The Center also distributes the monthly *NTIAC Newsletter* free to registered users.

**SERVICES:** Answers technical inquiries; provides advisory, literature-searching, bibliographic, and current-awareness (SDI) services; distributes publications; conducts seminars and workshops. Services are provided on a partial-cost-recovery basis.

**QUALIFIED USERS:** Anyone, but priority is given to Department of Defense, other government agencies, and private sector users, in that order.

## 82

**Nuclear Data Project**  
Oak Ridge National Laboratory  
P.O. Box X  
Oak Ridge, Tenn. 37830  
Tel: (615) 483-8611 Ext. 3-1612  
Director: W. Bruce Ewbank  
Deputy Director: Fred E. Bertrand

**SPONSOR:** Division of Basic Energy Sciences of the Department of Energy.

**YEAR STARTED:** 1948.

**STAFF:** 12 professionals (6 part-time) and 6 technical support.

**MISSION AND SCOPE:** To collect and evaluate nuclear structure data from radioactive decay and nuclear reactions.

**HOLDINGS:** A complete computer-indexed library of published works in experimental nuclear physics and a computer-based system for evaluated nuclear structure data (ENSDF). Numerous computer programs are maintained for: data checking, performing auxiliary calculations, preparing specialized data compilations, and preparing drawings, tables, and textual material from the ENSDF. Other programs are maintained for generating general and specialized reference lists.

**PUBLICATIONS:** Reference lists and compilations of nuclear structure data are prepared for the journal *Nuclear Data Sheets*, published by Academic Press, Inc.

**SERVICES:** Provides selected reference lists and answers specific questions pertaining to references or data within its scope on an information exchange basis. The Project's major publication, *Nuclear Data Sheets*, can be purchased from Academic Press, Inc., 111 Fifth Ave., New York, N.Y. 10003. Extensive reference and keyword lists are available from DOE/RECON in the Nuclear Structure References (NSR) file.

**QUALIFIED USERS:** Anyone in the scientific or technical community.

### **83**

**Nuclear Safety Information Center**  
Oak Ridge National Laboratory  
P.O. Box Y  
Oak Ridge, Tenn. 37830  
Tel: (615) 483-8611 Ext. 3-7253  
Director: William B. Cottrell  
Assistant Director: J. R. Buchanan

**SPONSORS:** Nuclear Regulatory Commission and Department of Energy.

**YEAR STARTED:** 1963.

**STAFF:** 12 part-time (equivalent to 6 full-time) professionals.

**MISSION:** To serve the nuclear community by collecting, storing, evaluating, and disseminating nuclear safety information generated throughout the world.

**SCOPE:** All aspects of safety relevant to the nuclear fuel cycle, including: safety criteria; operating experience; accident analysis; environmental surveys; monitoring and radiation exposure of man; siting and containment of facilities; transporting and handling of radioactive materials; reactor transients, kinetics, and stability; and nuclear instrumentation, control, and safety systems.

**HOLDINGS:** Reference file of over 125,000 items (increasing by about 12,000 a year), indexed in depth, of information in the above areas; special documents on nuclear safety such as reactor safety analysis reports.

**PUBLICATIONS:** The Technical Progress Review *Nuclear Safety* (bimonthly); state-of-the-art reports; topical bibliographies.

**SERVICES:** Answers technical inquiries; prepares special bibliographies; provides current-awareness (SDI) and technical consulting services; permits onsite use of document collection. Services are provided free to sponsoring agencies and their contractors and on a cost-recovery basis to others.

**QUALIFIED USERS:** U.S. government agencies and their contractors, research and educational institutions, and industry.

### **84**

**Office of Director, Division of Cancer Treatment**  
National Cancer Institute, NIH  
Building 31, Room 3A52  
9000 Rockville Pike  
Bethesda, Md. 20014

Tel: (301) 496-4291

Director: Dr. Vincent T. DeVita, Jr.

Point of Contact: Dr. Saul A. Schepartz

SPONSOR: National Institutes of Health.

YEAR STARTED: 1955.

STAFF: 15 full-time, including computer systems analysts, computer programmers, and technical information specialists.

MISSION: To plan and conduct the organization of technical information on cancer treatment, including information generated by the Cancer Treatment Program and other collaborative research programs, and to act as the focal point for information on the Cancer Treatment Program, which has as its objective the search for chemical compounds with an antitumor effect.

SCOPE: Cancer chemotherapy. The Cancer Treatment Program encompasses direct research as well as surveillance over the world's literature on cancer therapy.

HOLDINGS: The Cancer Treatment Program maintains a number of data banks of biological and chemical information. One major computerized data bank contains raw and evaluated biological data on approximately 675,000 natural and synthetic materials; another contains structural data on 300,000 synthetic compounds, of which nomenclature information is available on approximately 265,000. A hard copy collection of original articles abstracted for *Cancer Therapy Abstracts* is also maintained.

PUBLICATIONS: *Cancer Therapy Abstracts*; *Cancer Treatment Reports*; data compilations.

SERVICES: Answers inquiries; provides consulting and literature-searching services; provides abstracting and indexing services on contract basis; distributes publications at cost.

QUALIFIED USERS: Nonproprietary data is made available on a limited basis to federal agencies and others involved in research in cancer therapy and to interested scientists and physicians. Publications are available to anyone.

## 85

### **Phase Diagrams for Ceramists**

Inorganic Materials Division

Institute for Materials Research

National Bureau of Standards

Washington, D.C. 20254

Tel: (301) 921-2842

Director: Lawrence P. Cook

SPONSORS: Inorganic Materials Division, National Bureau of Standards, and American Ceramic Society, Inc.

YEAR STARTED: About 1956.

STAFF: 3 experts in phase equilibria and 1 clerical (all part-time).

MISSION: To collect phase diagrams of inorganic nonmetallic systems from various sources and to publish them periodically for the benefit of scientists and engineers in the various disciplines who need and use such information.

SCOPE: The center collects phase diagrams in these categories: metal-oxygen systems; metal oxides; systems with oxygen-containing radicals, e.g., carbonates, sulfates, nitrates, and chlorates; systems containing halides, sulfides, and cyanides, both alone and with other substances; and systems of water with metal oxides and miscellaneous substances. Commentaries that the center prepares on the diagrams cover sources and purity of materials, methods, standards, and physical property data.

HOLDINGS: Phase diagrams of nonmetallic, inorganic, anhydrous substances, compiled from journals, reports, and patents.

PUBLICATIONS: The center searches the world literature, edits diagrams, and prepares commentaries for the periodical *Phase Diagrams for Ceramists*, which is published and sold by the American Ceramic Society, 4055 North High St., Columbus, Ohio 43214.

SERVICES: Answers inquiries; provides consulting services to government agencies and other organizations on a contract basis or without charge.

**QUALIFIED USERS:** No restrictions.

**86**

**Photonuclear Data Center**  
Center for Radiation Research  
Institute for Basic Standards  
National Bureau of Standards  
Washington, D.C. 20234  
Tel: (301) 921-2625  
Director: Dr. Everett G. Fuller

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data and the Nuclear Sciences Division, National Bureau of Standards.

**YEAR STARTED:** 1963.

**STAFF:** 2 nuclear physicists (1.7 man-years) and 1 clerk (0.7 man-year).

**MISSION:** (1) To furnish the scientific and technological communities with information analysis and data center services relating to the interaction of electromagnetic radiation with nuclei, and (2) to systematically abstract, collect, index, and evaluate relevant data from the published literature as well as to maintain a library of digitized photonuclear cross section data.

**SCOPE:** Photonuclear reactions; capture reactions; electron scattering; gamma rays; nuclei; cross section; photon scattering; giant resonance; photoproton; photoneutron; photofission; nuclear physics.

**HOLDINGS:** All papers published in the field since 1955; a file of 5,000 data abstract sheets giving information on over 5,800 individual measurements; a library of 1,160 digitized photonuclear cross section curves for 110 different nuclei.

**PUBLICATIONS:** *Photonuclear Data Index* (a periodically updated annotated index to the data on photonuclear reactions that have been published in the world's scientific literature); *Photonuclear Reaction Data* (1973, NBS Spec. Publ. 380).

**SERVICES:** Answers technical inquiries; provides consulting, reference, and literature-searching services; prepares formal and informal state-of-the-art surveys and correlations of data; distributes publications and data compilations; makes referrals to other sources of information; permits onsite use of collections. Services are free.

**QUALIFIED USERS:** All scientists with professional interest in the field.

**87**

**Physical Data Group**  
Lawrence Livermore Laboratory  
University of California  
P.O. Box 808  
Livermore, Calif. 94550  
Tel: (415) 447-1100 Ext. 3127  
Group Leader: Robert J. Howerton

**SPONSOR:** Department of Energy.

**YEAR STARTED:** 1957.

**STAFF:** 10 full-time, with specialties in nuclear physics, nuclear engineering (including neutronics and photonics), Monte Carlo code development, information system design, and computer programming.

**MISSION AND SCOPE:** (1) To collect and disseminate neutron, photon, and charged particle cross-section data required for weapons, weapon effects, shielding, and reactor calculations (experimental and evaluated data) (Contact: Robert J. Howerton); (2) to develop computer codes for producing constants required for neutronic and photonic codes employing diffusion, discrete ordinates, and Monte Carlo methods (Contact: D. E. Cullen); (3) to collect and disseminate integral neutron experiment data, critical and bulk, static and dynamic, required for the testing and evaluation of neutronic and photonic data, and for the improvement of calculational methods (Contact: S. T. Perkins); (4) to develop Monte Carlo neutronics and photonics computer codes (Contact: E. F. Plechaty); and (5) to develop computer programs to unify storage, manipulation, reorganization, retrieval, and display of numeric and textual information.

**HOLDINGS:** Data collections as specified above.

**PUBLICATIONS:** 17 reports have been issued in a series entitled *An Integrated System for Production of Neutronics and Photonics Calculational Constants*.

**SERVICES:** Answers inquiries; provides consulting services and research and development information; distributes publications; permits onsite use of collections.

**QUALIFIED USERS:** Anyone, but priority is given to U.S. government agencies and their contractors, with others being served on a time-permitting basis.

## **88**

**Plastics Technical Evaluation Center (PLASTEC)**  
U.S. Army Armament Research and Development Command

Dover, N.J. 07801

Tel: (201) 328-4222 (Director)  
328-3189 (Technical specialists)  
328-5859 (Technical specialists, composites)  
328-2778 (Library services)

Director: Harry E. Pebly

**SPONSOR:** Army Materiel Development and Readiness Command.

**YEAR STARTED:** 1960.

**STAFF:** Total of 16, including 5 subject specialists, professional publication and information services personnel, and onsite contractor personnel.

**MISSION:** To collect, evaluate, and disseminate technical information and data on plastic materials, adhesives, and composites of interest to the Department of Defense, its contractors, and suppliers; to distribute these data and evaluations of them to these activities in anticipation of their needs or on request, as the occasion may require; and to render technical advice and consultation when such assistance is requested.

**SCOPE:** Coverage within the field of plastics emphasizes, but is not limited to, these main areas: (1) structural composites, (2) electrical and electronic applications, (3) adhesives, (4) materials applications and processing, (5) microbiological deterioration, (6) test methods and specifications, (7) compatibility and reactivity, (8) packaging/foams, and (9) encapsulation.

**HOLDINGS:** A library of 23,000 documents, primarily reports of U.S. government agencies and their contractors and technical conference papers.

**PUBLICATIONS:** State-of-the-art reports, handbooks, analyses, indexes, directories, annotated bibliographies.

**SERVICES:** Answers inquiries; provides technical advice and consulting services; makes referrals; performs computer literature searches on demand of its own collection, DDC, and open literature through DIALOG and ORBIT; permits onsite use of collection. Most reports are available to the public through the National Technical Information Service. Fees may be charged for services requiring more than 1 hour of staff time or those involving computer searches.

**QUALIFIED USERS:** Primarily U.S. government agencies and their contractors; also available to others in the United States on a fee basis as the workload permits. Services are provided to foreign organizations by arrangement with the embassy involved.

## **89**

**Primate Information Center**

Regional Primate Research Center, SJ-50

University of Washington

Seattle, Wash. 98195

Tel: (206) 543-4376

Director: Maryeva W. Terry

**SPONSOR:** Animal Resources Branch, Division of Research Resources, National Institutes of Health.

**YEAR STARTED:** 1961.

**STAFF:** 4 specialists in such fields as biomedicine, primatology, and animal behavior.

**MISSION:** To provide literature-based information on living nonhuman primates to scientists studying these animals for themselves or as surrogates for man; and to provide supply information on nonhuman primates and their tissues available from or wanted by U.S. scientific institutions.

**SCOPE:** The Center's bibliographic data base covers primatology, biomedical sciences, behavioral sciences, and laboratory animal medicine and science. The Primate Supply data bases contain notices of animals available or wanted plus information on colonies providing facilities for shared research on primates and special services available to investigators using nonhuman primates.

**HOLDINGS:** Over 50,000 bibliographic citations of articles on primate research published since 1940. Citations are accumulated at the rate of 5,000 a year.

**PUBLICATIONS:** *Current Primate References* and *Primate Supply Bulletin* (both weekly); *Topical Bibliographies* (irregular).

**SERVICES:** Matches availability of and need for nonhuman primates; answers inquiries; prepares retrospective and recurrent topical bibliographies on request; makes referrals to other sources of information; permits onsite use of reprint collection. Primate Supply information is provided free; bibliographic services are provided on a fee basis.

**QUALIFIED USERS:** Primate Supply information is available only to scientists and institutions in the United States; bibliographic services are available to anyone.

**Director:** Dr. Robert Schuler  
**Supervisor:** Dr. Alberta B. Ross

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data, National Bureau of Standards, and by the Division of Basic Energy Sciences of the Department of Energy.

**YEAR STARTED:** 1965.

**STAFF:** Full-time: 2 technical (chemists) and 3 nontechnical. Part-time: 1 chemist.

**MISSION:** To collect, compile, and evaluate data on chemical reactions brought about by radiation.

**SCOPE:** Radiation chemistry, especially kinetic data on reactions in chemically-definable systems brought about by ionizing radiation, and also including radiation-induced luminescence; esr spectra; radiolysis mechanisms and radiation yields; kinetics of photochemical and photophysical processes in solution.

**HOLDINGS:** Computer-based bibliographic data base covering 35,000 documents.

**PUBLICATIONS:** *Biweekly List of Papers on Radiation Chemistry* with annual cumulation and indexes (available by subscription); bibliographies, data compilations, reviews.

**SERVICES:** Answers inquiries; provides reference, literature-searching, and current-awareness services; analyzes data; distributes publications; makes referrals to other sources of information; permits onsite use of collection.

**QUALIFIED USERS:** Scientists interested in the field.

## 90

**Radiation Chemistry Data Center**  
Radiation Laboratory  
University of Notre Dame  
Notre Dame, Ind. 46556  
Tel: (219) 283-6527 or 283-6528

## 91

**Radiation Shielding Information Center**  
Oak Ridge National Laboratory  
P.O. Box X  
Oak Ridge, Tenn. 37830

Tel: (615) 483-8611 Ext. 3-6944  
Coordinator: Mrs. Betty F. Maskewitz

**SPONSORS:** Department of Energy (Division of Reactor Research and Technology and Division of Biomedical and Environmental Research), the Defense Nuclear Agency, and the Nuclear Regulatory Commission.

**YEAR STARTED:** 1962.

**STAFF:** 12 full-time, 5 part-time, and a 4-member technical advisory committee, including research scientists, computer and programming specialists, information specialists, and clerical staff.

**MISSION:** To serve as an information exchange medium between shielding research and design projects throughout the government and industry, with the purpose of saving time and preventing duplication of work.

**SCOPE:** The Center serves the field of radiation shielding research and development by collecting, organizing, evaluating, and disseminating information related to radiation from reactors, radioisotopes, weapons, and accelerators. In addition to published information, the Center collects, examines, packages, and disseminates complex digital computer codes, evaluated cross section data sets, multigroup data libraries, radiation environment data, and benchmark problems for use in shielding calculations.

**HOLDINGS:** A computerized file of information on radiation shielding research and development, and a microfiche collection of shielding literature.

**PUBLICATIONS:** Newsletter (monthly), state-of-the-art reviews, data compilations, indexed bibliographies, and abstracts of computer code and data packages.

**SERVICES:** With the assistance of the computerized information system, the Center answers technical inquiries, prepares state-of-the-art reviews and general bibliographies, and disseminates selected information to fill individual needs indicated by customer profiles. It fills requests for abstracts of computer code and data

packages and makes recommendations, advises, and trouble-shoots on problems connected with the code and data collection. Seminar-workshops on specific topics are held and the proceedings are published as state-of-the-art reviews. Technical conferring services and personal assistance to visitors to the Center are provided.

**QUALIFIED USERS:** All scientific and technical personnel.

## 92

### **Rare-Earth Information Center (RIC)**

Energy and Mineral Resources Research Institute

Iowa State University

Ames, Iowa 50011

Tel: (515) 294-2272  
(FTS) 865-2272

Director: Dr. Karl A. Gschneidner, Jr.

**SPONSORS:** The Ames Laboratory of the Department of Energy and over 40 U.S. and foreign rare earth producers and advanced technology corporations.

**YEAR STARTED:** 1966.

**STAFF:** 1 full-time professional (chemistry) and 1 part-time professional (metallurgy); 2 half-time nonprofessionals.

**MISSION:** To serve the scientific community by collecting, storing, evaluating, and disseminating rare earth information from various sources.

**SCOPE:** The Center is concerned primarily with the physical metallurgy and solid state physics of the rare earth metals and their alloys, but it also maintains files on the analytical, inorganic, and physical chemistry, geochemistry, ceramics, and toxicity of the rare earth elements and compounds.

**HOLDINGS:** About 18,000 reprints, reports, abstracts, and books.

**PUBLICATIONS:** *Rare-Earth Information Center News* (quarterly, distributed free); technical reports, state-of-the-art reviews, data compilations, bibliographies.

**SERVICES:** Answers inquiries; provides literature-searching and abstracting and indexing services; makes referrals to other sources of information; permits onsite use of collection. A minimum charge of \$25 has been set to cover the expenses involved in answering most typical inquiries.

**QUALIFIED USERS:** Anyone.

### 93

#### **Reliability Analysis Center**

RADC (RBRAC)

Griffiss Air Force Base, N.Y. 13441

Tel: (315) 330-4151

Program Director: Anthony J. Feduccia

Technical Director: Harold A. Lauffenburger

**SPONSORS:** Rome Air Development Center, Griffiss Air Force Base, N.Y.; Air Force Systems Command, Andrews Air Force Base, Washington, D.C.; Defense Logistics Agency, Cameron Station, Va.

**YEAR STARTED:** 1968.

**STAFF:** 16 professionals and 14 nonprofessionals, all full-time. In addition, technical support is available from staff engineers and scientists of the Rome Air Development Center and the IIT Research Institute, Chicago, Ill., which operates the Center.

**MISSION:** To serve as the central Department of Defense activity for the collection, storage, reduction, organization, review, assessment, analysis, and dissemination of information and experience data bearing on the reliability of microelectronic devices and the influence and contribution of part design, material, manufacturing techniques, processing, configuration, testing practices, screening practices, and electrical and environmental stresses on the nature of failures encountered during fabrication, testing, and operation. The Center's objective is to provide better knowledge and deeper understanding of the nature of failures in microcircuits and their causes

by analysis, review, and evaluation of available literature and other information, and by the synthesis of this information into a data file, publications, reliability prediction models, and techniques which will provide timely, highest-quality data to key users within government and industry for their use in improving, selecting, evaluating, and establishing reliability and quality assurance procedures for, and applying parts and devices in, the design, development, production, and operation of reliable military systems and equipments.

**SCOPE:** The Center is concerned with microelectronic circuit devices which are expected to be used in future design of military equipment and which are of most immediate significance to the electronic government-industry complex. Coverage includes monolithic integrated circuits, metal oxide semiconductor integrated circuits, hybrid circuits, thin film circuits, and integrated arrays. The Center analyzes and disseminates information that is generated during all phases of device fabrication, testing, equipment assembly, and operation. Data is also collected on discrete semiconductors, nonelectronic parts, and equipment/systems.

**HOLDINGS:** Data files that are continually updated through information collected from device and equipment manufacturers, system contractors, and field operations.

**PUBLICATIONS:** 5 distinct types of microcircuit reliability data compendia, a microcircuit reliability handbook, and an annotated reference bibliography, all updated periodically, and a quarterly newsletter.

**SERVICES:** Provides retrospective and current-awareness search services; provides technical consulting assistance on specific user problems; provides reliability analysis computer program tapes. A schedule of service charges is provided on request.

**QUALIFIED USERS:** Government, industry, and academic organizations working in the technical area.

**94****Research Materials Information Center**

Solid State Division  
Oak Ridge National Laboratory  
P.O. Box X  
Oak Ridge, Tenn. 37830  
Tel: (615) 483-8611 Ext. 3-1287  
Director: T. F. Connolly

SPONSOR: Department of Energy.

YEAR STARTED: 1964.

STAFF: 2 professionals and 1 nonprofessional.

MISSION: To provide information on the preparation, properties, and availability of inorganic solid-state research specimens.

SCOPE: Physical, optical, magnetic, and electrical properties of high-purity solid-state inorganic research materials and their availability, preparation, and characterization.

HOLDINGS: Up-to-date listings of available and desired materials; open literature and reports on the above areas.

PUBLICATIONS: *Solid State Physics Literature Guides* (published by Plenum Press): Vol. 1. Ferroelectric Materials and Ferroelectricity; Vol. 2. Semiconductors: Preparation, Crystal Growth and Selected Properties; Vol. 3. Groups IV, V, and VI Transition Metals and Compounds: Preparation and Properties; Vol. 4. Electrical Properties of Solids: Surface Preparation and Methods of Measurement; Vol. 5. Bibliography of Magnetic Materials and Tabulation of Magnetic Transition Temperatures; Vol. 6. Ferroelectrics Literature Index; Vol. 7. Scattering of Thermal Neutrons; Vol. 8. Bibliography of Microwave Optical Technology; and Vol. 9. Laser Window, Mirror, and Filter Materials (in press).

SERVICES: Answers inquiries regarding availability of research-quality specimens; provides literature-searching services; provides references to documents and to current R&D projects; provides bibliographic support for the writing of critical reviews; serves as focal point for

exchange of information between producers and users of research-quality materials.

**QUALIFIED USERS:** DOE and its contractors and others actively participating in the Center's information exchange program.

**95****Shock and Vibration Information Center**

Naval Research Laboratory  
Code 8404  
Washington, D.C. 20375  
Tel: (202) 767-2220  
Director: Henry C. Pusey

SPONSORS: Department of Defense, National Aeronautics and Space Administration, and other government agencies.

YEAR STARTED: 1947.

STAFF: 3 professionals with a background in shock and vibration and 2 clerical, all full-time.

MISSION: To collect, correlate, and disseminate information on all aspects of mechanical shock and vibration as they affect equipment and materials and to encourage the solution of shock and vibration problems. Priority is given to the particular needs of the Center's sponsors, but services and publications are available to the entire technical community.

SCOPE: All applicable worldwide information, published and unpublished, on dynamic mechanical phenomena, including structural dynamics, transportation and service environments (shock, vibration, and acoustics), test techniques and equipment, mathematical analysis and interpretation of environmental data, design, material properties, fatigue, and damping.

HOLDINGS: Published and unpublished information, worldwide, held under bibliographic control.

PUBLICATIONS: *The Shock and Vibration Digest* (monthly journal containing abstracts of

all current journal articles on shock and vibration, meeting calendar and programs, book reviews, and other pertinent news); *Shock and Vibration Bulletins* (approximately annual, containing technical papers and proceedings of symposia); *Index of Environmental Test Equipment in Government Establishments* (1960, rev. 1967); comprehensive state-of-the-art analyses (2 or 3 a year). Publications are sold by the Center.

**SERVICES:** Answers inquiries; provides consulting, reference, literature-searching, and abstracting and indexing services; provides R&D information; makes referrals to specialists in the field; sponsors an annual symposium; permits on-site use of collection.

**QUALIFIED USERS:** Environmental engineers, test engineers, structural dynamicists, and other technical workers in the fields of shock, vibration, or acoustics.

## 96

### **Shock Wave Data Center**

Lawrence Livermore Laboratory, L-450  
H Division  
P.O. Box 808  
Livermore, Calif. 94550  
Tel: (415) 447-1100 Ext. 7791  
Director: M. van Thiel

**SPONSOR:** The Center is affiliated with the National Standard Reference Data System and is supported by the Department of Energy.

**YEAR STARTED:** 1965.

**STAFF:** 2 part-time physicists and part-time assistance of computer technicians.

**MISSION:** To collect, evaluate, compile, and distribute shock wave data on condensed systems.

**SCOPE:** Shock wave information, on chemically classifiable materials, that allows the calculation of at least one Hugoniot curve. Shock and particle velocity, pressure, compression, and density are listed for all Hugoniot curves. Other pressure volume curves will be listed as they become available.

**PUBLICATIONS:** Compilation of shock wave data (updated periodically; for sale by NTIS).

**SERVICES:** Answers inquiries concerning data within the Center's scope.

**QUALIFIED USERS:** DOE and its contractors. Information is provided to others on an exchange basis only.

## 97

### **Suicide Prevention Center and the Institute for Studies of Self-Destructive Behavior**

1041 South Menlo Ave.,  
Los Angeles, Calif. 90006

Tel: (213) 381-5111

**Directors:** Norman L. Farberow, Ph. D.  
Robert E. Litman, M.D.

**SPONSORS:** National Institute of Mental Health; U.S. Department of Justice; California Department of Mental Hygiene; and Los Angeles County Department of Health.

**YEAR STARTED:** 1958.

**STAFF:** 10 full-time.

**MISSION:** To study self- and other destructive behaviors, including drug abuse, violence, accidents, and crime, and to develop models for clinical intervention to reduce these behaviors and to train professionals and nonprofessionals; also, to study large-scale disasters and train for mental health response.

**SCOPE:** Suicide; substance abuse; violence; accidents; risk-taking behavior; crime; crisis intervention; volunteer training and utilization in direct mental health services; psychological autopsy; large-scale disasters.

**HOLDINGS:** Small collection of technical reports, motion pictures, data compilations, bibliographies, reviews, reprints, newsletters, pamphlets, and unevaluated data.

**PUBLICATIONS:** *Vita* (international newsletter); *Techniques in Crisis Intervention: A Training Manual*; *Proceedings, IVth International Con-*

*ference on Suicide Prevention and Proceedings, VIth International Conference on Suicide.*

**SERVICES:** Answers inquiries; provides consulting services and short lists of literature citations in response to specific inquiries; prepares analyses; conducts seminars; makes referrals to other sources of information; permits onsite use of collection. Services are free to users affiliated with nonprofit, academic, or governmental agencies.

**QUALIFIED USERS:** Social scientists and clinicians in the field.

## 98

**Superconductivity Materials Data Center**  
General Electric Research and Development Center  
Schenectady, N.Y. 12301  
Tel: (518) 346-8771 Ext. 6430 or 6336  
Director: Dr. B. W. Roberts

**SPONSOR:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data, National Bureau of Standards.

**YEAR STARTED:** 1965.

**STAFF:** 1 physicist and 1 documentalist, both part-time.

**MISSION:** To collect, collate, and disseminate information on superconductive materials and to evolve standard values of important parameters for these materials.

**SCOPE:** Properties covered include critical temperatures, critical magnetic fields, crystallographic descriptions, and thermodynamic parameters.

**HOLDINGS:** Data maintained on computer cards.

**PUBLICATIONS:** Periodic reports of new data, including "Survey of Superconductive Materials and Critical Evaluation of Selected Properties" in

*Journal of Physical and Chemical Reference Data, v. 5 (1976), p. 581-821 (Reprint No. 84; NBS Technical Note in preparation).*

**SERVICES:** Answers individual inquiries; makes available periodic reports of new data; produces, at intervals, summations of accumulated data on superconductive materials and materials tested for superconductivity.

**QUALIFIED USERS:** Scientific and technical personnel with a professional interest in the field.

## 99

**Table of Isotopes Project**  
Nuclear Science Division  
Lawrence Berkeley Laboratory  
University of California  
Berkeley, Calif. 94720  
Tel: (415) 843-2740 Ext. 6152  
Director: C. Michael Lederer

**SPONSORS:** Department of Energy, Division of Physical Research. (The 7th edition of the *Table of Isotopes* was funded also by the National Bureau of Standards, Office of Standard Reference Data.) The Project is affiliated with the Nuclear Data Network (NDN), whose program is coordinated by the National Nuclear Data Center (Brookhaven National Laboratory).

**YEAR STARTED:** 1940.

**STAFF:** 1 group leader-senior compiler, 1 full-time and 2 part-time compilers, 1 general assistant (word-processing, library management, data management, general administrative), 1 part-time data management assistant.

**MISSION:** To compile and evaluate data and produce *Nuclear Data Sheets* for masses  $A = 146-152$  and  $A = 163-194$ ; to provide other publication, data evaluation, and information services as appropriate for or on behalf of the Laboratory (LBL), NDN, and their sponsors.

**SCOPE:** Nuclear structure data, including properties of radioisotopes and stable nuclei, nuclear reactions, and nuclear level schemes.

**HOLDINGS:** (1) Radioactive decay and nuclear reaction level schemes, including data through 1976 (evaluated data file, computer readable). (2) Tabulated radioactive decay data, and stable isotope properties, plus excited-state half-lives (selected experimental data plus extensive references to additional data, computer readable). (3) Nuclear magnetic and quadrupole moments through April 1977 (selected experimental data, computer readable). (4) Various hard-copy files and copies of computer-readable files, including reference indices to the above data covering data published from 1958 to the present.

**PUBLICATIONS:** *Table of Isotopes* (7 editions, the 7th published by John Wiley and Sons in 1978); *Table of Nuclear Moments* (4 editions, the 4th included in the 7th edition of the *Table of Isotopes*).

**SERVICES:** Answers requests for data within the limits of staff and time. An interactive program package for calculation of internal conversion coefficients, alpha and beta decay rates, and Clebsch-Gordan coefficients is maintained for on-line users, who may connect to the Lawrence Berkeley Laboratory computer center via dial-up lines.

**QUALIFIED USERS:** No restrictions for personal services. Use of on-line programs requires an LBL computer account, available to U.S. government agencies, contractors, and grantees.

**STAFF:** 7, consisting of 1 administrative/management, 1 supervisor of the TACTEC data base, 1 Washington liaison, 1 editing and coordination, and 3 clerical. In addition, there is technical support as needed from Battelle's staff of more than 1,000 scientists and engineers.

**MISSION:** To collect, analyze, store, and disseminate information concerning technology related to tactical warfare; to provide a quick-response question-answering service to qualified users; to prepare bibliographies, literature surveys, and technical summaries; and to provide technological support in the areas of science and engineering.

**SCOPE:** The technology of tactical warfare from incipient insurgency through tactical nuclear warfare. The Center is concerned with all fields of science and technology (the physical, biological, social, and engineering sciences and the many technical areas relating to them). Specific subject areas include but are not limited to: Weapons, munitions, and armor; mobility and logistics; operations analysis; chemical warfare (to include decontamination); surveillance, communications, and electronics; socio-technical sciences such as training; and ecological sciences.

**HOLDINGS:** Over 40,000 documents covering the entire spectrum of tactical warfare.

**PUBLICATIONS:** Technical summaries, bibliographies, literature surveys, interpretive analyses, research studies.

**SERVICES:** Provides quick-response answers to technical inquiries in the form of documented information and/or analysis of problems; performs R&D tasks to develop new systems or to modify existing systems for specific Department of Defense applications; conducts research and/or feasibility studies on devices and techniques to be employed by the Army, Navy, or Air Force; makes referrals to other sources of information where appropriate; permits onsite reference.

**QUALIFIED USERS:** All services are limited to Department of Defense agencies and laboratories and their contractors and are subject to the approval of DARPA.

## 100

**Tactical Technology Center (TACTEC)**  
Battelle Memorial Institute  
Columbus Laboratories  
505 King Ave.  
Columbus, Ohio 43201  
Tel: (614) 424-5047  
Project Manager: J. Tuck Brown

**SPONSOR:** Tactical Technology Office, Defense Advanced Research Projects Agency (DARPA), Department of Defense.

**YEAR STARTED:** 1963.

## **101**

### **Technology Application Center (TAC)**

2500 Central Ave. SE.

University of New Mexico

Albuquerque, N. Mex. 87131

Tel: (505) 277-3622

Director: Dr. Stanley A. Morain

Point of Contact: Margie Hlava, Manager of Information

**SPONSOR:** National Aeronautics and Space Administration, Technology Utilization Office.

**YEAR STARTED:** 1965.

**STAFF:** Total of 34, including: 1 information and library professional; 7 management; 12 technical professionals; and 14 clerical and non-professionals.

**MISSION:** To facilitate the transfer and utilization of government-generated research knowledge, thus stimulating industrial, economic, academic, public, and private problem solving and decisionmaking.

**SCOPE:** To fulfill its mission, TAC accesses over 130 government and commercial computer data bases in all areas of human knowledge. The data bases provide TAC with access to over 30 million research documents in 7 broad subject areas: (1) biology and chemistry; (2) business and government; (3) education, humanities, and social sciences; (4) engineering; (5) environment and pollution; (6) geology and mineral resources; and (7) medical and pharmaceutical sciences. The data derived from these broad subject areas are used by TAC in operating its three major information programs: industrial information; energy information; and remote sensing-natural resources information.

**HOLDINGS:** TAC accesses 9 computerized information systems: NASA, DOE/RECON, Lockheed, SDC, Informatics, OASIS, BRS, TRIS, and Technote (a list of the data bases covered by these systems is available). Microform holdings include STAR and IAA reports, plus microfiche of over 800 bibliographies (totaling over 2,000 fiche) on a large variety of subjects. Other holdings include 7,000 bound volumes,

131,800 aerial and satellite photographs, and 78 periodical subscriptions. TAC is a selective depository for NASA publications.

**PUBLICATIONS:** TAC's serial publications include: *Heat Pipe Technology: A Bibliography With Abstracts*; *Hydrogen Energy: A Bibliography With Abstracts*; *Solar Thermal Energy Utilization: A Bibliography With Abstracts*; *Quarterly Literature Review of the Remote Sensing of Natural Resources*; and *Well Drilling Fluids: A Bibliography With Abstracts* (all updated quarterly). Other publications are: *New Mexico Energy Research Resource Registry* (cumulative, January 1976); *Noise Pollution Resources Compendium* (cumulative, 1973); *Utilization of Waste Glass* (cumulative, 1973); *Rolomite* (papers of 1969 conference); and *Wind Energy Utilization: A Bibliography With Abstracts* (cumulative, 1974).

**SERVICES:** Provides computerized current-awareness searches and monthly or quarterly update services on a wide variety of topics; provides consulting, research, data collection and analysis, manual literature-searching, and referral services; offers short courses on selected topics. TAC personnel work with clients during all stages of the problem definition, data base selection, search strategy, manual and computer searching, and document acquisition process.

**QUALIFIED USERS:** Services are provided on a fee or contract basis to private, business, government, academic, and institutional clients.

## **102**

### **Texas A&M Thermodynamics Research Center (TRC)**

Texas Engineering Experiment Station

Texas A & M University

College Station, Tex. 77843

Tel: (713) 846-8765

Director: Dr. Bruno J. Zwolinski

Associate Director: Dr. Randolph C. Wilhoit

**SPONSORS:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference

Data, National Bureau of Standards, and by the American Petroleum Institute and the Texas Engineering Experiment Station.

**YEAR STARTED:** Thermodynamics Research Center Data Project (formerly Manufacturing Chemists Association Research Project)—1955; American Petroleum Institute Research Project 44—1942; NBS Research Project—1963; International Data Series (IDS) Series A—1973.

**STAFF:** 19 full-time and 6 part-time, including research scientists, compilers, information scientists, technical writers and editors, documentalists, data processing coordinator and computer specialists, and clerical staff.

**MISSION:** To serve as a central agency for the petrochemical industry through API Research Project 44 for critically evaluated thermodynamic and spectroscopic information on all classes of hydrocarbons, including sulfur and nitrogen derivatives of hydrocarbons; to serve as a central agency for the chemical industry through the Thermodynamics Research Center Data Project to provide selected thermodynamic and spectroscopic information on all classes of organic compounds other than hydrocarbons; to prepare exhaustive comprehensive surveys and compilations of physical and thermodynamic data in the form of technical reviews and monographs for the NBS Office of Standard Reference Data on classes of organic compounds of importance to the chemical industry; to conduct basic experimental and theoretic studies for developing precise correlation procedures for predicting bulk physical and thermodynamic properties of organic substances; and, in cooperation with Dr. H. V. Kehiaian of the Centre de Recherches de Microcalorimetrie et de Thermocheimie, Marseille, France, to issue looseleaf data sheets on thermodynamic properties of mixtures for the International Data Series.

**SCOPE:** Physical, thermodynamic, and spectral (infrared, ultraviolet, Raman, mass, atomic hydrogen and carbon 13 isotope nuclear magnetic resonance) properties of chemical compounds, including hydrocarbons and sulfur and nitrogen derivatives of hydrocarbons, of interest to the petroleum and chemical industries.

**HOLDINGS:** A specialized library of data acquisitions (2,800 volumes).

**PUBLICATIONS:** Looseleaf data sheets, issued semiannually, supplementing existing tables of selected physical and thermodynamic property data and catalogs of selected spectroscopic data; state-of-the-art reviews and bibliographies; annual Substance-Property Index and Bibliography for the yearly *IUPAC Bulletin of Thermodynamics and Thermochemistry* (Robert D. Freeman, Editor); comprehensive technical reports, handbooks, and monographs on thermodynamic data of closely-related groups and classes of organic compounds. Publications are available on the basis of direct sales and subscriptions from the TRC Data Distribution Office, Texas A & M University, College Station, Tex. 77843. A publications list will be furnished on request.

**SERVICES:** Provides substantive replies to technical inquiries regarding the methods of data analysis, correlation, and selection; provides reference and consulting services on fee basis; makes referrals to other sources of information.

**QUALIFIED USERS:** Qualified users in the United States and throughout the world include petroleum research laboratories, coal and gas industries, chemical industrial research laboratories, consulting laboratories, state and federal government laboratories, research institutes, libraries, universities and colleges, biophysical research groups and organizations, agricultural industry, pharmaceutical industry, and private individuals.

## 103

**Thermophysical Properties Research Center (TPRC)**  
Center for Information and Numerical Data Analysis and Synthesis (CINDAS)  
Purdue University  
Purdue Industrial Research Park  
2595 Yeager Rd.  
West Lafayette, Ind. 47906  
Tel: (317) 463-1581  
(800) 428-7675 (toll free)  
Director: Dr. Y. S. Touloukian

Point of Contact: W. H. Shafer, Assistant Director

SPONSORS: The Center is affiliated with the National Standard Reference Data System and is sponsored by several U.S. government agencies and industrial organizations.

YEAR STARTED: 1957.

STAFF: Approximately 37.

MISSION: To relieve scientists, engineers, designers, and technical librarians of the responsibility of maintaining documentation files with partial coverage and resultant ineffective searches for thermophysical properties.

SCOPE: Thermophysical properties of matter, including thermal conductivity, accommodation coefficient, thermal contact resistance, thermal diffusivity, specific heat, viscosity, emissivity, reflectivity, absorptivity, transmissivity, absorptance to emittance ratio, Prandtl number, thermal linear expansion coefficient, and thermal volumetric expansion coefficient. Thermophysical properties are keyed to representative groups such as slags, scales, ceramics, oxides, glasses, mixtures, solutions, metals, nonmetals, minerals, compounds, coatings, cermets, pharmaceuticals, cosmetics, toiletries, petroleum products, animal and vegetable substances, fabrics, yarns, rubbers, plastics, resins, polymers, paper and wood products, and building materials.

HOLDINGS: Over 75,000 unclassified technical papers, of which more than 90 percent are on microfiche, with an annual accession rate of about 6,000.

PUBLICATIONS: *Thermophysical Properties Research Literature Retrieval Guide, Basic Edition* (3-book set providing 33,700 references up to July 1964 keyed to properties for 45,000 different materials); *Thermophysical Properties Research Literature Retrieval Guide, Supplement I* (6 volumes and 2,200 pages, published in 1973, providing 26,000 references up to January 1971 for 52,000 different materials); *Thermophysical Properties of High Temperature Solid Materials* (6-volume [9 books] reference work with 8,500

pages; *Thermophysical Properties of Matter—TPRC Data Series* (13 volumes, 1970-76; also available by individual volume for each of the properties covered); *Masters Theses in the Pure and Applied Sciences* (annual listing). Most of the Center's publications are marketed by well-known commercial publishers.

SERVICES: Extracts data and performs data analyses; performs theoretical and experimental research; provides technical advisory and consulting services; provides current-awareness service; makes literature searches through computer-assisted retrieval system; reproduces research documents on microfiche; answers inquiries; conducts seminars and workshops; makes referrals to other sources of information. Nominal fees are requested for data evaluation, literature-searching, and reproduction services.

QUALIFIED USERS: No restrictions.

## 104

### Toxic Materials Information Center (TMIC)

Information Center Complex

Oak Ridge National Laboratory

P.O. Box X

Oak Ridge, Tenn. 37830

Tel: (615) 483-8611 Ext. 3-0386 or 3-6823

Director: Dr. Gerald U. Ulrikson

Point of Contact: Robert H. Ross

SPONSORS: National Science Foundation (Research Applied to National Needs Program) and the Department of Energy.

YEAR STARTED: 1972.

STAFF: 3 information specialists with backgrounds in the biological sciences and 2 clericals.

MISSION: Presently, to provide information support to the National Science Foundation's Research Applied to National Needs (RANN) Program.

SCOPE: TMIC prepares a quarterly abstract journal of research published by participants in

the Chemical Threats to Man and the Environment program of NSF-RANN. In conjunction with this, an annual directory of program personnel is published that provides detailed information concerning each project. TMIC also prepares state-of-the-knowledge literature overview documents for NSF on the environmental and health aspects of selected organic compounds.

**PUBLICATIONS:** *Trace Contaminants Abstract Journal* (quarterly); *Trace Contaminants Directory* (annual); *Mercury in the Environment—An Annotated Bibliography*; *Arsenic in the Environment—An Annotated Bibliography*; *Cadmium—The Dissipated Element*; *Environmental, Health and Control Aspects of Coal Conversion: An Information Overview*; *A Survey of State Views on Energy Development in the Eastern United States for 1975, 1985, and 2000*; *Environmental and Health Aspects of Selected Organohalide Compounds: An Information Overview*.

**SERVICES:** Provides abstracting, indexing, and data base creation services; prepares bibliographies and state-of-the-knowledge reviews.

**QUALIFIED USERS:** Anyone.

## 105

### Toxicology Information Response Center (TIRC)

Oak Ridge National Laboratory  
P.O. Box X  
Building 2024, Room 53  
Oak Ridge, Tenn. 37830  
Tel: (615) 483-8611 Ext. 3-0211  
(FTS) 850-0211  
Director: Helga B. Gerstner

**SPONSOR:** Toxicology Information Program of the National Library of Medicine.

**YEAR STARTED:** 1971.

**STAFF:** 7 professional and 2 administrative support.

**MISSION:** To serve as a national and in-

ternational center for toxicology and related information.

**SCOPE:** TIRC provides extensive toxicology information and reference services on individual chemicals, chemical classes, and a wide variety of toxicology-related topics.

**HOLDINGS:** TIRC uses a variety of information sources. On-line access is available to MEDLINE, TOXLINE, RECON, and the diversified files of such commercial data systems as Lockheed DIALOG, SDC ORBIT, and BRS. The ORNL data files are searchable in batch mode and also provide SDI service. Hard copy secondary sources used include *Biological Abstracts*, *BioResearch Index*, *Chemical Abstracts*, *Current Contents*, *Excerpta Medica*, *Index Medicus*, *ATOMINDEX*, *Science Citation Index*, *Energy Research Abstracts*, *Nutrition Abstracts and Reviews*, *Air Pollution Abstracts*, and others. In addition to TIRC's own toxicology reference library and subject files, the ORNL library system provides valuable resources with more than 200,000 bound volumes and 600,000 reports. Of the 3,500 subscription journals, about 1,200 are biologically or environmentally oriented.

**PUBLICATIONS:** Selected reports of topical concern are prepared and made available through the National Technical Information Service, Springfield, Va. Publication lists, information brochures, and assorted fact sheets are available from the Center on request.

**SERVICES:** TIRC compiles comprehensive literature packages tailored to a user's specific request or a current need on a fee-for-service basis. Computer-associated charges and reproduction costs, as well as use fees for copyrighted materials, are assessed in addition to an hourly charge. Government agencies may consider interagency agreements. Response times vary from an immediate telephone answer to 8 to 12 days for computerized data base searching to 3 or 4 weeks for in-depth literature searches. TIRC's information packages are synthesized by its multidisciplinary staff into a variety of formats; specific published toxicology data, individualized literature searches, topical bibliographies, annotated and/or keyworded bibliographies, state-

of-the-art overviews, custom searches of computerized data systems, and SDI service. Requests for information or searches may be submitted by letter or telephone.

**QUALIFIED USERS:** The scientific, administrative, and public communities.

## 106

### **Underground Excavation and Rock Properties Information Center (UERPIC)**

Center for Information and Numerical Data Analysis and Synthesis (CINDA)

Purdue University

Purdue Industrial Research Park

2595 Yeager Rd.

West Lafayette, Ind. 47906

Tel: (317) 463-1581

(800) 428-7675 (toll free)

Director: Dr. Y. S. Touloukian

Point of Contact: Mr. W. H. Shafer, Assistant Director

**SPONSOR:** The Center is sponsored by the National Science Foundation and operated by the Thermophysical Properties Research Center at Purdue University. Research is directed by an interdisciplinary team from the departments of Geosciences, Civil Engineering and Mechanical Engineering.

**YEAR STARTED:** 1972.

**STAFF:** Approximately 6 part-time professionals.

**MISSION AND SCOPE:** To catalog and compile data on mechanical, thermal, and electrical properties of rock formations and substances; to study the responses of earth media and rock types to nuclear blast and explosive phenomena; and to study and evaluate excavation and tunneling techniques, including costs and other pertinent variables.

**HOLDINGS:** Computer-based data bank of rock properties, with an estimated annual accession rate of 1,000 papers.

**PUBLICATIONS:** Bibliographies and abstracts.

**SERVICES:** Answers technical inquiries; provides consulting services; provides reference and literature-searching services through a computer-based retrieval system; makes referrals to other sources of information. All research documents on microfiche are available for purchase. A full description of the services and a fee schedule are available on request.

**QUALIFIED USERS:** No restrictions.

## 107

### **Water Resources Center**

Desert Research Institute

University of Nevada

P.O. Box 60220

Reno, Nev. 89506

Tel: (702) 673-4750

Acting Executive Director: Gilbert F. Cochran

**SPONSORS:** Office of Water Research and Technology, Bureau of Reclamation, Bureau of Land Management, and Bureau of Mines, all of the U.S. Department of the Interior; U.S. Department of Energy; States of Nevada, California, and Montana; various local agencies; private industry; the World Bank; and the Government of Mexico.

**YEAR STARTED:** 1959.

**STAFF:** 23 professionals, including hydrologists, hydrogeologists, civil engineers, chemists, physicists, biologists, geochemists, and systems analysts.

**MISSION:** To serve as an interface with the scientific and industrial community for the collection, compilation, and analysis of data relevant to the scope of the Center's work.

**SCOPE:** All aspects of water resources, particularly as related to water in the arid and semiarid lands; water supply; water quality; water chemistry; water pollution control and evaluation; water storage; water use; ground water hydrology; hydrologic modeling and testing; ground water

management; land subsidence; nuclear detonation effect on the hydrologic system and prediction of radionuclide migration in the ground; precipitation; runoff; streams; basins; watersheds; evaporation control; hydrogeology; drainage; recreational use of water; plant-water relationships; conjunctive use of surface and ground water; legal and institutional aspects of water resources; ground water flow systems in Nevada; limnological and fisheries studies in streams and lakes; in-stream flow needs. The Center has a basic research program in theoretical aspects of fluid flow, physiology of fish and other aquatic fauna, and physical and chemical properties of water and its impurities. It also has two complete analytical water chemistry laboratories and a rock and sediment laboratory.

**HOLDINGS:** The Center is continually updating a hydrologic data storage and retrieval computer system containing hydrologic data from six states, including Alaska, incorporating chiefly DOE and EPA activity. The Center is a member of NAWDEX and also maintains a water resources data bank for the State of Nevada that includes data on surface and ground water and water quality. The library contains 20 journals and 40,000 reports, papers, and books, including those from the 54 OWRT state water resource centers in the United States, and is a repository for DOE energy publications.

**PUBLICATIONS:** Technical reports and project reports. A publications list is available.

**SERVICES:** Answers inquiries; provides consulting services; distributes publications and data compilations; analyzes data. Services are provided free to sponsors and others who contribute to the Center's operation and on a full-cost-recovery basis to the general public.

**QUALIFIED USERS:** No restrictions.

## 108

**X-Ray and Ionizing Radiation Data Center**  
Center for Radiation Research  
Institute for Basic Standards

### National Bureau of Standards

Washington, D.C. 20234

Tel: (301) 921-2685

Director: John H. Hubbell

**SPONSOR:** The Center is affiliated with the National Standard Reference Data System and is supported by the Office of Standard Reference Data, National Bureau of Standards.

**YEAR STARTED:** 1952.

**STAFF:** 1 physicist (full-time) and 1 secretary (1/4 time). In addition, 5 physicists are available for consultation and part-time assistance.

**MISSION:** To provide X-ray attenuation data required for: Radiation shielding design (reactor, space vehicle, medical); analysis of nuclear physics experiments and of medical X-ray effects; thickness and density gauges; irradiation technology; electron microprobe microanalysis; X-ray crystallography; and ionosphere prediction.

**SCOPE:** Attenuation and energy-absorption coefficients (cross sections) for 0.1 keV-100 GeV photon (X-ray, gamma-ray) interactions with matter, including Compton and Rayleigh scattering, atomic photoeffect, and electron-positron pair production.

**HOLDINGS:** 10,000 reprints of direct or peripheral relevance to photon attenuation or cross sections; books, periodicals, reports.

**PUBLICATIONS:** Reports such as *Photon Cross Sections, Attenuation Coefficients, and Energy Absorption Coefficients From 10 keV to 100 GeV* (1969, NSRDS-NBS 29); state-of-the-art reviews published in appropriate journals, data compilations, bibliographies, abstracts and indexes.

**SERVICES:** Answers inquiries by letter or phone; provides consulting services; distributes data compilations.

**QUALIFIED USERS:** Scientific, medical, and engineering personnel with professional interest in the field.

## Personal Names Index

Aegerter, Joyce, 41  
Anderson, George C., 28  
Appling, Richard N., Jr., 15  
Bainbridge, Arnold E., 28  
Bargar, Martha, 61  
Bargeski, Albert M., 79  
Barnett, C. F., 23  
Baum, Samuel, 61  
Beaty, E. C., 62  
Bernard, S. R., 58  
Bertrand, Fred E., 82  
Brown, J. Tuck, 100  
Buchanan, J. R., 83  
Butler, Margaret, 4  
Butrymowicz, Daniel B., 29  
Carter, G. C., 3  
Chan, Warren W., 30  
Chase, Michael, 9  
Clark, W. Bruce, 43  
Cochran, Gilbert F., 107  
Cohen, Arthur M., 44  
Connally, T. F., 94  
Cook, Lawrence P., 85  
Cottrell, William B., 57, 83  
Crotty, John J., 11  
Davis, James E., 49  
Denecke, Mildred F., 59  
DeVille, Denise Marie, 47  
DeVita, Vincent T., Jr., 84  
Domalski, Eugene S., 21  
Eddy, Peter A., 45  
Edington, Everett D., 47  
Eldridge, Marie D., 70  
Elliot, David H., 60  
Ely, Donald P., 43  
Erickson, Don, 41  
Ewbank, W. Bruce, 82  
Farberow, Norman I., 97  
Feduccia, Anthony J., 93  
Fife, Jonathan D., 42  
Flaxman, Erwin, 52  
Fuller, Everett G., 86  
Gerstner, Helga B., 103  
Gordon, Edmund, 52  
Gschneidner, Karl A., Jr., 92  
Gubiotti, Ross, 64  
Hall, Carroll, 47  
Hall, H. Tracey, 56  
Hammons, Anna S., 54  
Hampson, Robert, 19  
Heath, R. L., 53  
Hlava, Margie, 101  
Hoffman, K. C., 69  
Holland, Joshua Z., 17  
Horne, Eleanor V., 51  
Howe, Robert W., 48  
Howerton, Robert J., 87  
Hoy, Harry C., 57  
Hubbell, John H., 108  
Husik, Harold, 64  
Janz, George J., 68  
Johnson, David S., 74  
Kahles, John F., 63  
Katz, Lilian G., 39  
Kelly, Robert L., 7  
Kerr, William, 66  
Lauffenburger, Harold A., 93  
Lederer, Michael C., 99  
Lincoln, J. Virginia, 75  
Litman, Robert E., 97  
Lovas, Frank J., 67  
Martin, Georgia A., 6, 27  
Martin, William C., 5  
Marzone, Jean, 52  
Maskewitz, Betty F., 8, 91  
Massanari, Karl, 50  
Mattson, Margaret J., 13  
Merrill, Leo, 56  
Meyers, H., 75  
Mighell, Alan D., 25  
Mindlin, Harold, 64, 65  
Mitchell, Daniel B., 73  
Morain, Stanley A., 101  
Morgan, John D., Jr., 12  
Morissett, Irving, 49  
Mulligan, John J., 13  
Negaard, Gordon R., 2  
Ochinero, Robert V., 79  
O'Donnell, Bernard, 46  
Olien, Neil A., 24  
Omaggio, Alice C., 45  
Ondik, Helen M., 25  
Pearlstein, Sol, 78  
Pebly, Harry E., 88  
Peterson, Marla, 37  
Pfuderer, Helen, 32  
Phillips, S. L., 76  
Piele, Philip K., 40  
Pietkiewicz, Wesley, 22  
Pusey, Henry C., 95  
Rice, Dorothy P., 71  
Rios, Betty Rose D., 47  
Roberts, B. W., 98  
Rosenstock, Henry M., 26  
Ross, Alberta B., 90  
Ross, Robert H., 104  
Rothgeb, Carrie Lee, 72  
Rumble, J. R., 62  
Sanchez, Bonnie, 44  
Schepartz, Saul A., 84  
Schmidt, C. L., 26  
Shafer, W. H., 34, 103, 106  
Shapley, A. H., 75  
Shober, F. R., 10  
Shorr, Marilyn, 42  
Shuman, Frederick G., 77  
Sickler, Ruth, 40  
Smith, H. Morgan, 35  
Smith, Richard T., 81  
Staples, Bert R., 33  
Strommen, Norton D., 16  
Terry, Maryeva W., 89  
Thomas, Susan B., 39  
Thomson, Robert D., 14  
Touloukian, Y. S., 34, 103, 106  
van Thiel, M., 96  
Vette, James I., 80  
Wagman, Donald D., 21  
Walker, Donald K., 55  
Walter, Pat, 9  
Walz, Garry R., 38  
Wands, Ralph C., 1

**Wassom, John S.**, 36  
**Watkins, Allen H.**, 31  
**Watson, Evelyn**, 18

**Wiese, Wolfgang L.**, 6, 27  
**Wilhoit, Randolph C.**, 102  
**Wysong, Jeanne**, 20

**Zalubas, R.**, 5  
**Zissis, George J.**, 59  
**Zwolinski, Bruno J.**, 102

## Geographic Index

**Alabama**  
Maxwell Air Force Base, 35

**Alaska**  
Juneau, 13

**California**  
Berkeley, 7, 76, 99  
La Jolla, 28  
Livermore, 87, 96  
Los Angeles, 9, 44, 97  
Santa Barbara, 30

**Colorado**  
Boulder, 24, 49, 62, 75  
Denver, 55

**District of Columbia**  
Washington, 1, 3, 5, 6, 12, 16, 17, 19, 21, 25, 26, 27, 29, 33, 42, 50, 61, 67, 70, 74, 79, 85, 86, 95, 108

**Idaho**  
Idaho Falls, 53

**Illinois**  
Argonne, 4  
Urbana, 39, 46

**Indiana**  
Notre Dame, 90  
West Lafayette, 34, 103, 106

**Iowa**  
Ames, 92

**Maryland**  
Bethesda, 11, 84

**Camp Springs**, 77  
**Greenbelt**, 80  
**Hyattsville**, 71  
**Laurel**, 20  
**Rockville**, 72

**Michigan**  
Ann Arbor, 38, 59, 66

**Missouri**  
Columbia, 16

**Nevada**  
Reno, 107

**New Hampshire**  
Hanover, 22

**New Jersey**  
Dover, 88  
Princeton, 51

**New Mexico**  
Albuquerque, 101  
Las Cruces, 47

**New York**  
Griffiss Air Force Base, 93  
New York, 52  
Schenectady, 98  
Syracuse, 43  
Troy, 68  
Upton, 69, 78

**North Carolina**  
Asheville, 73

**Ohio**  
Cincinnati, 63

**Columbus**, 37, 48, 60, 64, 65, 100  
**Wright-Patterson Air Force Base**, 2

**Oregon**  
Eugene, 40

**Pennsylvania**  
Pittsburgh, 14

**South Dakota**  
Sioux Falls, 31

**Tennessee**  
Oak Ridge, 8, 18, 23, 32, 36, 54, 57, 58, 82, 83, 91, 94, 104, 105

**Texas**  
College Station, 102  
Houston, 16  
San Antonio, 81

**Utah**  
Provo, 56

**Virginia**  
Arlington, 45  
Reston, 41

**Washington**  
Richland, 10  
Seattle, 89  
Spokane, 15

## Sponsors and Other Organizations Index

### A

Advanced Research Projects Agency (ARPA). *See* Defense Advanced Research Projects Agency (DARPA)  
Advisory Center on Toxicology, 1  
Aerospace Structures Information and Analysis Center (ASIAC), 2  
Agency for International Development  
    International Demographic Statistics, 61  
Agriculture, Department of  
    Center for Climatic and Environmental Assessment (CCEA), 16  
Air Force  
    Aerospace Structures Information and Analysis Center (ASIAC), 2  
    Environmental Information Division, 35  
    Reliability Analysis Center, 93  
Alaska Field Operations Center, Bureau of Mines, 13  
Alloy Data Center, 3  
American Alliance for Health, Physical Education, and Recreation  
    ERIC Clearinghouse on Teacher Education, 50  
American Association of Colleges for Teacher Education  
    ERIC Clearinghouse on Teacher Education, 50  
American Ceramic Society, Inc.  
    Phase Diagrams for Ceramists, 85  
American Gas Association  
    Cryogenic Data Center, 24  
American Petroleum Institute  
    Texas A&M Thermodynamics Research Center (TRC), 102  
Ames Laboratory  
    Rare-Earth Information Center (RIC), 92  
Anamet Laboratories, Inc.  
    Aerospace Structures Information and Analysis Center (ASIAC), 2  
Applied Physics Laboratory  
    Chemical Propulsion Information Agency (CPIA), 20  
Argonne Code Center, 4

### Army

Cold Regions Science and Technology Information Analysis Center, 22  
Institute of Polar Studies, 60  
Machinability Data Center, 63  
Mechanical Properties Data Center (MPDC), 64  
Metals and Ceramics Information Center (MCIC), 65  
Plastics Technical Evaluation Center (PLASTEC), 88  
Association of Teacher Educators  
    ERIC Clearinghouse on Teacher Education, 50  
Atomic Energy Levels Data Center, 5  
Atomic Transition Probabilities Data Center, 6

### B

Battelle Memorial Institute  
    Mechanical Properties Data Center (MPDC), 64  
Metals and Ceramics Information Center (MCIC), 65  
Tactical Technology Center (TACTEC), 100  
Berkeley Particle Data Group, 7  
Biogeochemical Ecology Information Center. *See* Ecological Sciences Information Center, 32  
Biomedical Computing Technology Information Center, 8  
Brain Information Service, 9  
Breeder Reactor Fuel Systems Information Center, 10  
Brigham Young University  
    High Pressure Data Center, 56  
Brookhaven National Laboratory  
    National Center for Analysis of Energy Systems, 69  
    National Nuclear Data Center, 78  
Bureau of Drugs, Division of Poison Control, 11  
Bureau of Land Management  
    Water Resources Center, 107

Bureau of Mines  
 Associate Director—Mineral and Materials Supply/Demand Analysis, 12  
 Alaska Field Operations Center, 13  
 Eastern Field Operations Center, 14  
 Water Resources Center, 107  
 Western Field Operations Center, 15

Bureau of Radiological Health  
 Biomedical Computing Technology Information Center, 8

Bureau of Reclamation  
 Water Resources Center, 107

Bureau of the Census  
 International Demographic Statistics, 61

**C**

California Department of Mental Hygiene  
 Suicide Prevention Center and the Institute for Studies of Self-Destructive Behavior, 97

Center for Applied Linguistics  
 ERIC Clearinghouse on Languages and Linguistics (ERIC/CCL), 45

Center for Climatic and Environmental Assessment (CCEA), 16

Center for Experiment Design and Data Analysis, 17

Center for Information and Numerical Data Analysis and Synthesis (CINDAS)  
 Electronic Properties Information Center (EPIC), 34  
 Thermophysical Properties Research Center (TPRC), 103  
 Underground Excavation and Rock Properties Information Center (UERPIC), 106

Center for Information on Internal Dosimetry of Radiopharmaceuticals, 18

Chemical Kinetics Information Center, 19

Chemical Propulsion Information Agency (CPIA), 20

Chemical Thermodynamics Data Center, 21

Cold Regions Science and Technology Information Analysis Center, 22

Columbia University  
 ERIC Clearinghouse on Urban Education, 52

Commerce, Department of. *See* Bureau of the Census; National Bureau of Standards; National Oceanic and Atmospheric Administration

Controlled Fusion Atomic Data Center, 23

Council for Exceptional Children  
 ERIC Clearinghouse on Handicapped and Gifted Children, 41  
 Cryogenic Data Center, 24  
 Crystal Data Center, 25

**D**

DASIAC, 30  
 Data Center for Ion Energetics, 26  
 Data Center on Atomic Line Shapes and Shifts, 27  
 Data Collection and Processing Group, Scripps Institution of Oceanography, 28

Defense Advanced Research Projects Agency (DARPA)  
 Infrared Information and Analysis Center (IRIA), 59  
 Tactical Technology Center (TACTEC), 100

Defense, Department of  
*See also* Air Force; Army; Defense Advanced Research Projects Agency; Defense Logistics Agency; Defense Nuclear Agency; Navy  
 Shock and Vibration Information Center, 95

Defense Logistics Agency (DLA)  
 Chemical Propulsion Information Agency (CPIA), 20  
 Electronic Properties Information Center (EPIC), 34  
 Infrared Information and Analysis Center (IRIA), 59  
 Machinability Data Center, 63  
 Mechanical Properties Data Center (MPDC), 64  
 Metals and Ceramics Information Center (MCIC), 65  
 Nondestructive Testing Information Analysis Center (NTIAC), 81  
 Reliability Analysis Center, 93

Defense Nuclear Agency (DNA)  
 DOD Nuclear Information and Analysis Center (DASIAC), 30  
 Radiation Shielding Information Center, 91

Department of (U.S. Government). *See* Agriculture; Air Force; Army; Commerce; Defense; Energy; Health, Education, and Welfare; Interior; Justice; Navy; State; Transportation

Desert Research Institute  
 Water Resources Center, 107

Diffusion in Metals Data Center, 29  
DOD Nuclear Information and Analysis Center (DASIAC), 30

**E**

Earth Resources Observation Systems (EROS) Data Center, 31  
Eastern Field Operations Center, Bureau of Mines, 14  
Ecological Sciences Information Center, 32  
Educational Resources Information Center. *See* ERIC Clearinghouses  
Education Testing Service  
ERIC Clearinghouse on Tests, Measurement, and Evaluation, 51  
Electric Power Research Institute  
Ecological Sciences Information Center, 32  
National Center for Analysis of Energy Systems, 69  
Electrolyte Data Center, 33  
Electronic Properties Information Center (EPIC), 34  
Energy, Department of  
Argonne Code Center, 4  
Atomic Energy Levels Data Center, 5  
Berkeley Particle Data Group, 7  
Biomedical Computing Technology Information Center, 8  
Breeder Reactor Fuel Systems Information Center, 10  
Center for Information on Internal Dosimetry of Radiopharmaceuticals, 18  
Controlled Fusion Atomic Data Center, 23  
Data Collection and Processing Group, 28  
Ecological Sciences Information Center, 32  
Environmental Mutagen Information Center, 36  
Gamma-Ray Spectrum Catalogue, 53  
Health and Environmental Studies Program (HESP), 54  
Information Center for Energy Safety, 57  
Information Center for Internal Exposure, 58  
Institute of Polar Studies, 60  
Michigan Memorial-Phoenix Project, 66  
National Center for Analysis of Energy Systems, 69  
National Geothermal Information Resource, 76  
National Nuclear Data Center, 78  
Nuclear Data Project, 82  
Nuclear Safety Information Center, 83

Physical Data Group, 87  
Radiation Chemistry Data Center, 90  
Radiation Shielding Information Center, 91  
Rare-Earth Information Center (RIC), 92  
Research Materials Information Center, 94  
Shock Wave Data Center, 96  
Table of Isotopes Project, 99  
Toxic Materials Information Center (TMIC), 104  
Water Resources Center, 107  
Environmental Data Service, NOAA  
Center for Climatic and Environmental Assessment (CCEA), 16  
Center for Experiment Design and Data Analysis, 17  
National Climatic Center (NCC), 73  
National Geophysical and Solar-Terrestrial Data Center, 75  
National Oceanographic Data Center (NODC), 79  
Environmental Information Division, USAF, 35  
Environmental Mutagen Information Center, 36  
Environmental Protection Agency  
Health and Environmental Studies Program (HESP), 54  
Environmental Research Institute of Michigan Infrared Information and Analysis Center (IRIA), 59  
ERIC Clearinghouse on Adult, Career and Vocational Education, 37  
ERIC Clearinghouse on Counseling and Personnel Services, 38  
ERIC Clearinghouse on Early Childhood Education, 39  
ERIC Clearinghouse on Educational Management, 40  
ERIC Clearinghouse on Handicapped and Gifted Children, 41  
ERIC Clearinghouse on Higher Education, 42  
ERIC Clearinghouse on Information Resources, 43  
ERIC Clearinghouse for Junior Colleges, 44  
ERIC Clearinghouse on Languages and Linguistics, 45  
ERIC Clearinghouse on Reading and Communication Skills, 46  
ERIC Clearinghouse on Rural Education and Small Schools, 47  
ERIC Clearinghouse for Science, Mathematics, and Environmental Education, 148  
ERIC Clearinghouse for Social Studies/Social

**Science Education**, 49  
**ERIC Clearinghouse on Teacher Education**, 50  
**ERIC Clearinghouse on Tests, Measurement, and Evaluation**, 51  
**ERIC Clearinghouse on Urban Education**, 52

**F**

**Fish and Wildlife Service**  
Ecological Sciences Information Center, 32  
**Food and Drug Administration**  
*See also* Bureau of Radiological Health  
Bureau of Drugs, Division of Poison Control, 11  
Center for Information on Internal Dosimetry of Radiopharmaceuticals, 18

**G**

Gamma-Ray Spectrum Catalogue, 53  
**General Electric Research and Development Center**  
Superconductivity Materials Data Center, 98  
Geological Survey  
*Earth Resources Observation System (EROS) Data Center*, 31  
George Washington University  
ERIC Clearinghouse on Higher Education, 42  
Goddard Space Flight Center  
National Space Science Data Center, 80

**H**

**Hanford Engineering Development Laboratory**  
Breeder Reactor Fuel Systems Information Center, 10  
**Health and Environmental Studies Program (HESP)**, 54  
Health and Safety Analysis Center, 55  
**Health, Education, and Welfare, Department of**  
*See also* Bureau of Radiological Health; ERIC Clearinghouses; Food and Drug Administration; Health Resources Administration; National Cancer Institute; National Institute of Environmental Health Sciences; National Institute of Mental Health; National Institute of Neurological and Communicative Disorders and Stroke; National Institutes of Health; National

Library of Medicine  
National Center for Education Statistics, 70  
Health Resources Administration  
National Center for Health Statistics, 71  
High Pressure Data Center, 56

**I**

**Idaho National Engineering Laboratory**  
Gamma-Ray Spectrum Catalogue, 53  
Information Center for Energy Safety (ICES), 57  
Information Center for Internal Exposure, 58  
Infrared Information and Analysis Center (IRIA), 59  
Institute of Polar Studies, 60  
Interior, Department of the. *See* Bureau of Land Management; Bureau of Mines; Bureau of Reclamation; Fish and Wildlife Service; Geological Survey; Mining Enforcement and Safety Administration; Office of Water Research and Technology  
International Demographic Statistics, 61  
Iowa State University  
Rare-Earth Information Center (RIC), 92

**J**

JILA Atomic Collisions Information Center, 62  
Johns Hopkins University  
Chemical Propulsion Information Agency (CPIA), 20  
Joint Institute for Laboratory Astrophysics (JILA)  
JILA Atomic Collisions Information Center, 62  
Justice, Department of  
Suicide Prevention Center and the Institute for Studies of Self-Destructive Behavior, 97

**L**

Lawrence Berkeley Laboratory  
Berkeley Particle Data Group, 7  
National Geothermal Information Resource, 76  
Table of Isotopes Project, 99  
Lawrence Livermore Laboratory  
Physical Data Group, 87  
Shock Wave Data Center, 96  
Los Angeles County Department of Health  
Suicide Prevention Center and the Institute for

**Studies of Self-Destructive Behavior, 97**

**M**

Machinability Data Center, 63  
Marine Research Committee (State of Calif.)  
    Data Collection and Processing Group, 28  
Mechanical Properties Data Center (MPDC), 64  
Metals and Ceramics Information Center  
    (MCIC), 65  
Metcut Research Associates Inc.  
    Machinability Data Center, 63  
Michigan Memorial-Phoenix Project, 66  
Mining Enforcement and Safety Administration  
    Health and Safety Analysis Center, 55  
Molecular Spectra Data Center, 67  
Molten Salts Data Center, 68

**N**

National Academy of Sciences—National  
    Academy of Engineering—Institute of  
    Medicine—National Research Council  
    Advisory Center on Toxicology, 1  
National Aeronautics and Space Administration  
    Center for Climatic and Environmental  
    Assessment, 16  
Chemical Kinetics Information Center, 19  
Chemical Propulsion Information Agency  
    (CPIA), 20  
Cryogenic Data Center, 24  
National Space Science Data Center, 80  
Shock and Vibration Information Center, 95  
Technology Application Center (TAC), 101  
National Bureau of Standards  
    Alloy Data Center, 3  
    Atomic Energy Levels Data Center, 5  
    Atomic Transition Probabilities Data Center, 6  
Berkeley Particle Data Group, 7  
Chemical Kinetics Information Center, 19  
Chemical Thermodynamics Data Center, 21  
Cryogenic Data Center, 24  
Crystal Data Center, 25  
Data Center for Ion Energetics, 26  
Data Center on Atomic Line Shapes and  
    Shifts, 27  
Diffusion in Metals Data Center, 29  
Electrolyte Data Center, 33  
High Pressure Data Center, 56

JILA Atomic Collisions Information Center, 62  
Molecular Spectra Data Center, 67  
Molten Salts Data Center, 68  
Phase Diagrams for Ceramists, 85  
Photonuclear Data Center, 86  
Radiation Chemistry Data Center, 90  
Superconductivity Materials Data Center, 98  
Texas A&M Thermodynamics Research Center  
    (TRC), 102  
X-Ray and Ionizing Radiation Data Center, 108  
National Cancer Institute  
    Environmental Mutagen Information Center,  
        36  
    Office of Director, Division of Cancer Treat-  
        ment, 84  
National Center for Analysis of Energy Systems,  
    69  
National Center for Education Statistics, 70  
National Center for Health Statistics, 71  
National Clearinghouse for Mental Health In-  
    formation, 72  
National Clearinghouse for Poison Control Cen-  
    ters. *See* Bureau of Drugs, Division of  
    Poison Control, 11  
National Climatic Center (NCC), 73  
National Council of Teachers of English  
    ERIC Clearinghouse on Reading and Com-  
        munication Skills, 46  
National Education Association  
    ERIC Clearinghouse on Teacher Education, 50  
National Environmental Satellite Service, 74  
National Geographic Society  
    Institute of Polar Studies, 60  
National Geophysical and Solar-Terrestrial Data  
    Center, 75  
National Geothermal Information Resource, 76  
National Institute of Education. *See* ERIC  
    Clearinghouses  
National Institute of Environmental Health Sci-  
    ences  
    Environmental Mutagen Information Center,  
        36  
National Institute of Mental Health  
    National Clearinghouse for Mental Health In-  
        formation, 72  
    Suicide Prevention Center and the Institute for  
        Studies of Self-Destructive Behavior, 97  
National Institute of Neurological and Com-  
    municative Disorders and Stroke  
    Brain Information Service, 9  
National Institutes of Health

*See also* National Cancer Institute; National Institute of Environmental Health Sciences; National Institute of Neurological and Communicative Disorders and Stroke; National Library of Medicine

- Primate Information Center, 89
- National Library of Medicine
- Toxicology Information Response Center (TIRC), 105
- National Meteorological Center (NMC), 77
- National Nuclear Data Center, 78
- National Oceanic and Atmospheric Administration
- Center for Climatic and Environmental Assessment (CCEA), 16
- Center for Experiment Design and Data Analysis, 17
- National Climatic Center (NCC), 73
- National Environmental Satellite Service, 74
- National Geophysical and Solar-Terrestrial Data Center, 75
- National Meteorological Center (NMC), 77
- National Oceanographic Data Center (NODC), 79
- National Oceanographic Data Center (NO<sup>DC</sup>), 79
- National Science Foundation
- Berkeley Particle Data Group, 7
- Health and Environmental Studies Program (HESP), 54
- Institute of Polar Studies, 60
- Toxic Materials Information Center (TMIC), 104
- Underground Excavation and Rock Properties Information Center (UERPIC), 106
- National Space Science Data Center, 80
- National Standard Reference Data System
- Alloy Data Center, 3
- Atomic Energy Levels Data Center, 5
- Atomic Transition Probabilities Data Center, 6
- Berkeley Particle Data Group, 7
- Chemical Kinetics Information Center, 19
- Chemical Thermodynamics Data Center, 21
- Cryogenic Data Center, 24
- Crystal Data Center, 25
- Data Center for Ion Energetics, 26
- Data Center on Atomic Line Shapes and Shifts, 27
- Diffusion in Metals Data Center, 29
- Electrolyte Data Center, 33
- Gamma-Ray Spectrum Catalogue, 53
- High Pressure Data Center, 56
- JILA Atomic Collisions Information Center, 62
- Molecular Spectra Data Center, 67
- Molten Salts Data Center, 68
- Photonuclear Data Center, 86
- Radiation Chemistry Data Center, 90
- Shock Wave Data Center, 96
- Superconductivity Materials Data Center, 98
- Texas A&M Thermodynamics Research Center (TRC), 102
- Thermophysical Properties Research Center (TPRC), 103
- X-Ray and Ionizing Radiation Data Center, 108
- National Weather Service, NOAA
- National Meteorological Center (NMC), 77
- Navy
- Advisory Center on Toxicology, 1
- Chemical Propulsion Information Agency (CPIA), 20
- Data Collection and Processing Group, Scripps Institution of Oceanography, 28
- Infrared Information and Analysis Center (IRIA), 59
- Shock and Vibration Information Center, 95
- New Mexico State University
- ERIC Clearinghouse on Rural Education and Small Schools, 47
- Nondestructive Testing Information Analysis Center (NTIAC), 81
- Nuclear Data Project, 82
- Nuclear Regulatory Commission
- Argonne Code Center, 4
- Nuclear Safety Information Center, 83
- Radiation Shielding Information Center, 91
- Nuclear Safety Information Center, 83

**O**

- Oak Ridge Associated Universities
- Center for Information on Internal Dosimetry of Radiopharmaceuticals, 18
- Oak Ridge National Laboratory
- Biomedical Computing Technology Information Center, 8
- Controlled Fusion Atomic Data Center, 23
- Ecological Sciences Information Center, 32
- Environmental Mutagen Information Center, 36
- Health and Environmental Studies Program (HESP), 54
- Information Center for Energy Safety (ICES), 57

**I**

Information Center for Internal Exposure, 58  
Nuclear Data Project, 82  
Nuclear Safety Information Center, 83  
Radiation Shielding Information Center, 91  
Research Materials Information Center, 94  
Toxic Materials Information Center (TMIC), 104  
Toxicology Information Response Center (TIRC), 105

**O**

Office of Naval Research  
Advisory Center on Toxicology, 1  
Data Collection and Processing Group, Scripps Institution of Oceanography, 28  
Infrared Information and Analysis Center (IRIA), 59

**O**

Office of Standard Reference Data. *See* National Bureau of Standards

Office of the Director, Division of Cancer Treatment, 84

Office of Water Research and Technology  
Water Resources Center, 107

**O**

Ohio State University  
ERIC Clearinghouse on Adult, Career and Vocational Education, 37  
ERIC Clearinghouse for Science, Mathematics, and Environmental Education, 48  
Institute of Polar Studies, 60

**P**

Phase Diagrams for Ceramists, 85  
Photonuclear Data Center, 86  
Physical Data Group, Lawrence Livermore Laboratory, 87  
Plastics Technical Evaluation Center (PLASTEC), 88  
Primate Information Center, 89  
Public Health Service. *See* Bureau of Radiological Health; Food and Drug Administration; Health Resources Administration; National Cancer Institute; National Institute of Environmental Health Sciences; National Institute of Mental Health; National Institute of Neurological and Communicative Disorders and Stroke; National Institutes of Health; National Library of Medicine

Purdue University  
Electronic Properties Information Center (EPIC), 34

**T**

Thermophysical Properties Research Center (TPRC), 103  
Underground Excavation and Rock Properties Information Center (UERPIC), 106

**R**

Radiation Chemistry Data Center, 90  
Radiation Shielding Information Center, 91  
Rare-Earth Information Center (RIC), 92  
Reliability Analysis Center, 93  
Rensselaer Polytechnic Institute  
Molten Salts Data Center, 68  
Research Materials Information Center, 94  
Rome Air Development Center  
Reliability Analysis Center, 93

**S**

Scripps Institution of Oceanography  
Data Collection and Processing Group, 28  
Shock and Vibration Information Center, 95  
Shock Wave Data Center, 96  
Social Science Education Consortium, Inc.  
ERIC Clearinghouse for Social Studies/Social Science Education, 49

**S**

Society for Computer Medicine  
Biomedical Computing Technology Information Center, 8

**S**

Society of Nuclear Medicine  
Biomedical Computing Technology Information Center, 8

**S**

Southwest Research Institute  
Nondestructive Testing Information Analysis Center (NTIAC), 81

**S**

State, Department of  
*See also* Agency for International Development  
Institute of Polar Studies, 60

**S**

Suicide Prevention Center and the Institute for Studies of Self-Destructive Behavior, 97

**S**

Superconductivity Materials Data Center, 98  
Syracuse University  
ERIC Clearinghouse on Information Resources, 43

**T**

Table of Isotopes Project, 99

Tactical Technology Center (TACTEC), 100  
Technology Application Center (TAC), 101  
Texas A&M Thermodynamics Research Center  
(TRC), 102  
Thermophysical Properties Research Center  
(TPRC), 103  
Underground Excavation and Rock Properties  
Information Center (UERPIC), 106  
Toxic Materials Information Center (TMIC), 104  
Toxicology Information Response Center (TIRC),  
105  
Transportation, Department of  
Chemical Kinetics Information Center, 19

**U**

Underground Excavation and Rock Properties  
Information Center (UERPIC), 106  
University of California  
Berkeley Particle Data Group, 7  
Brain Information Service, 9  
Data Collection and Processing Group, Scripps  
Institution of Oceanography, 28  
ERIC Clearinghouse for Junior Colleges, 44  
National Geothermal Information Resource, 76  
Physical Data Group, Lawrence Livermore  
Laboratory, 87  
Shock Wave Data Center, 96  
Table of Isotopes Project, 99  
University of Colorado  
JILA Atomic Collisions Information Center, 62  
University of Illinois  
ERIC Clearinghouse on Early Childhood  
Education, 39

University of Michigan  
ERIC Clearinghouse on Counseling and Per-  
sonnel Services, 38  
Michigan Memorial-Phoenix Project, 66  
University of Nevada  
Water Resources Center, 107  
University of New Mexico  
Technology Application Center (TAC), 101  
University of Notre Dame  
Radiation Chemistry Data Center, 90  
University of Oregon  
ERIC Clearinghouse on Educational  
Management, 40  
University of Washington  
Primate Information Center, 89

**W**

Water Resources Center, 107  
Water Resources Scientific Information Center  
Ecological Sciences Information Center, 32  
Western Field Operations Center, Bureau of  
Mines, 15  
Westinghouse Hanford Co.  
Breeder Reactor Fuel Systems Information Cen-  
ter, 10  
World Bank  
Water Resources Center, 107

**X**

X-Ray and Ionizing Radiation Data Center, 108

## Subject Index

### A

Academic guidance, 37, 38  
Accident prevention, 55  
Accidents, 11, 83  
Achievement tests, 51  
Adhesives, 88  
Adolescent psychology, 72  
Adult education, 37  
Aerial explosions, 30  
Aerial photography, 31  
Aerodynamics, 2  
Aeronautics, 2  
Aeronomy, 75  
Aging, 72  
Air pollution, 104  
Aiglow, 75  
Alcoholism, 72  
Algae, 60  
Alloys, 3, 29, 63, 64, 65, 92, 94  
Aluminum, 65  
American Indians, 47  
Ammunition, 100  
Animal behavior, 89  
Animal products, 103  
Anthropology, 35, 60  
Antidotes, 11  
Aquaculture, 79  
Aquatic biology, 107  
Arid lands, 35, 107  
Armor, 100  
Artificial satellites, 31, 74, 80  
Astronomy, 80  
Astrophysics, 80  
Atmospheric physics, 17, 75, 77, 80  
Atomic energy levels, 5, 99  
Atomic collisions, 23, 62  
Atomic spectra, 5, 26, 27, 53  
Auroras, 75

### B

Ballistics, 20  
Baryons, 7  
Bathymetry, 75, 79  
Bedrocks, 60  
Behavior, 9, 97  
Benthos, 79  
Beryllium, 65  
Bilingualism, 45  
Bioclimatology, 16  
Biodeterioration, 79, 88  
Bioluminescence, 79  
Biomedical computer applications, 8  
Blast effects, 106  
Blast loads, 30  
Borides, 65  
Brain, 9

### C

Cancer, 84  
Carbides, 65  
Carbon, 65  
Career education, 37  
Cellular plastics, 88  
Census, 61  
Ceramics, 34, 63, 65, 85, 92, 103  
Cermets, 103  
Chemical properties, 19, 21, 26, 29, 33, 64  
Chemical propulsion, 20  
Chemical warfare, 100  
Child psychiatry, 72  
Childhood, 39  
Climatology, 16, 73  
Coastal zone management, 17  
Coatings, 65, 103

### Cold weather tests, 22

Colleges and universities, 42, 44

Collision cross sections, 62

Combustion, 20

Communication theory, 46

Comparative education, 49

Composite materials, 63, 65, 81, 88

Composite structures, 2

Compressibility, 56

Compton effect, 108

Computer information centers, 4, 8

Computer programs, 2, 4, 87

Computer systems programs, 4, 8

Constants, 4, 87

Construction materials, 64, 103

Corrosion, 65

Cosmetics, 103

Cosmic rays, 75, 80

Counseling, 38

Crop production, 16

Cryogenics, 24

Crystal growth, 94

Crystallography, 25, 98

Cultures (biology), 79

Cutting, 63

### D

Damage assessment, 16

Data processing, 4, 8, 87

Deep water ports, 17

Degradable plastics, 88

Demography, 49, 61, 71

Deserts, 35, 107

Developing countries, 61

Developmental psychology, 39, 51

**D**  
 Diffusion, 87  
 Diffusivity, 29, 103  
 Dosimetry, 18, 58, 83  
 Drilling, 63  
 Drug addiction, 97  
 Drug therapy, 84  
 Drugs, 11, 54, 79, 103, 105

**E**  
 Early childhood education, 39  
 Earth movements, 60, 75  
 Education, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 70, 84  
 Education of minorities, 47, 52, 70  
 Education of the disadvantaged, 47, 52  
 Education of the gifted, 41  
 Education of the handicapped, 41, 70  
 Education statistics, 51, 70  
 Educational administration, 40, 41, 42, 44, 70  
 Educational development, 38, 39, 48  
 Educational economics, 42, 70  
 Educational evaluation, 38, 40, 48, 50, 51  
 Educational facilities, 40, 52  
 Educational finances, 40  
 Educational information resources, 43  
 Educational programs, 39, 41, 48, 52  
 Educational psychology, 37, 39  
 Electric power generation, 32, 57, 69, 76, 101  
 Electrical properties, 34, 94, 98, 106  
 Electrical resistivity, 68  
 Electrochemistry, 68  
 Electroluminescence, 34  
 Electrolysis, 33  
 Electrolyte solutions, 33, 76  
 Electromagnetic properties, 81  
 Electromagnetic pulses, 30  
 Electromagnetic radiation, 3  
 Electron scattering, 86

**F**  
 Electro-optics, 59  
 Elementary particles, 7, 62, 87  
 Energy safety, 4, 57, 83, 91, 104  
 Energy economics, 4, 12, 69  
 Energy policy, 69  
 Energy research, 4, 66, 76, 101  
 Energy resources, 4, 13, 31  
 Energy supplies, 69  
 Environment simulation, 16, 17  
 Environmental education, 48, 49  
 Environmental effects, 13, 17, 20, 32, 35, 54, 88, 100  
 Environmental policy, 1  
 Eskimos, 60  
 Excavation, 106  
 Explosions, 55  
 Exports, 12

**G**  
 Fabrics, 103  
 Failure (materials), 2, 63, 81, 95  
 Fatigue (materials), 2  
 Ferrites, 34  
 Ferroelectric materials, 34, 94  
 Ferromagnetic materials, 34  
 Fireballs, 30  
 Fisheries, 107  
 Food additives, 105  
 Food chains, 28, 34  
 Fractures (materials), 2  
 Frozen soils, 22  
 Fuels, 4, 10, 11, 14, 24, 32, 57, 83  
 Fused salts, 68

**H**  
 Hadrons, 7  
 Handicapped children, 41  
 Hardening (systems), 30  
 Hazardous materials, 1, 11, 32, 36, 54, 58, 79, 83, 84, 91, 104, 105  
 Health physics, 8, 58, 66, 83  
 Health statistics, 71  
 Heat pipe technology, 101  
 Heat resistant materials, 63, 65  
 Heat treatment, 64  
 High energy physics, 94  
 High pressure tests, 56  
 High voltage machines, 4  
 Household chemicals, 11  
 Human ecology, 35  
 Hydrocarbons, 102  
 Hydrologic cycle, 107  
 Hydrologic models, 107  
 Hydrometeorology, 73, 107

**I**  
 Ice, 22, 60  
 Imports, 12  
 Industrial psychology, 72  
 Industrial safety, 55  
 Industrial training, 37  
 Inelastic scattering, 19  
 Infrared equipment, 59  
 Infrared radiation, 59  
 Infrared spectra, 7, 59  
 Instructional technology, 43, 45  
 Integrated circuits, 93  
 Intermetallics, 3, 65  
 International trade, 12  
 Ionization, 26, 30  
 Ionized gases, 62

**J**  
 Joining, 65      }

**K**  
 Kinetics, 4, 90

**L**

Laboratory animals, 89  
Lakes, 107  
Land use, 13, 31  
Language education, 45, 46  
Laser materials, 34, 59, 94  
Launch vehicles, 20  
Leisure, 37  
Leptons, 7  
Library science, 43  
Lichens, 60  
Limnology, 107  
Linguistics, 45  
Liquefaction, 24  
Loads (forces), 2  
Logistics, 100

**M**

Machinability, 63  
Machining, 63, 64  
Magnesium, 65  
Magnetic properties, 3, 34, 94, 106  
Magnetic resonance, 3, 4, 5  
Magnetohydrodynamics, 57  
Mammals, 1, 89  
Marine biology, 28, 79  
Marine geology, 28, 75, 79  
Marine geophysics, 75, 79  
Marine mineral deposits, 15  
Marine resources, 17, 31  
Masers, 59  
Mass communications, 43, 46  
Materials properties, 1, 2, 3, 4, 5, 11, 19, 21, 24, 25, 29, 32, 33, 34, 36, 54, 56, 59, 63, 64, 65, 81, 83, 88, 94, 95, 98, 102, 103, 104, 105, 106  
Materials recovery, 101  
Mathematical models, 16  
Mathematics education, 48  
Mechanical properties, 3, 6, 64, 65, 82, 95, 96  
Mental deficiency, 72  
Mental health services, 72, 97  
Mesons, 7  
Metal working, 65  
Metallography, 63

Metallurgy, 65, 92  
Metals, 3, 29, 34, 63, 64, 65, 81, 92, 94, 103, 104  
Meteorology, 16, 73, 77, 79, 80  
Mexican Americans, 47  
Microbiology, 60, 79  
Microelectronics, 93  
Microwave spectra, 67  
Migrant education, 47  
Military sciences, 100  
Milling (machining), 63  
Mine fires, 55  
Mine safety, 55  
Mineral deposits, 12, 13, 14, 15  
Mineral economics, 12, 13, 14, 15  
Mineral resources, 12, 13, 14, 15, 31  
Mineralogy, 13  
Minerals, 103, 106  
Mining, 13, 14, 15  
Mining law, 55  
Missile propulsion, 86  
Molten salts, 68  
Monte Carlo method, 87  
Moon, 80  
Mutagens, 30

**N**

Natural resources, 4, 12, 13, 14, 15, 31, 101  
Neurochemistry, 9  
Neuroendocrinology, 9  
Neuropharmacology, 9  
Neurophysiology, 9  
Neutron cross sections, 87  
Neutrons, 78, 87  
Nitrides, 65  
Noise pollution, 101  
Nondestructive tests, 81  
Nonmetallic materials, 12, 81, 103  
Nuclear chemistry, 66  
Nuclear cross sections, 4, 78, 82, 86, 87, 91  
Nuclear energy, 66  
Nuclear energy levels, 82  
Nuclear explosion effects, 30, 106, 107  
Nuclear fusion, 23

Nuclear magnetic moments, 82, 99  
Nuclear medicine, 8, 18  
Nuclear physics, 4, 66, 82, 86, 87, 99  
Nuclear reactions, 78, 82, 99  
Nuclear reactor control, 4, 83  
Nuclear reactor safety, 4, 83, 91  
Nuclear reactor sites, 83  
Nuclear structure, 82, 99  
Nuclear warfare, 87, 100  
Nuclear weapons effects, 87, 91

**O**

Occupational diseases, 55, 104  
Occupational safety, 51, 83  
Oceanography, 28, 79  
Optical properties, 34, 59, 94  
Optics, 59, 81  
Organic compounds, 102  
Outdoor education, 47  
Oxides, 65, 103

**P**

Packaging, 88  
Particle accelerators, 4, 91  
Particle interactions, 23, 62, 78  
Particle physics, 23, 62, 66, 78, 80  
Permafrost, 13, 22  
Personality tests, 51  
Personnel development, 37, 38, 50  
Pesticides, 105  
Petroleum geology, 13  
Petroleum products, 103  
Phase diagrams, 3, 56, 85, 94  
Photochemical reactions, 19, 26, 90  
Photographic data processing, 31  
Photointerpretation, 31  
Photon cross sections, 87, 108  
Photons, 7, 78, 86, 87, 108  
Photonuclear reactions, 86  
Physical chemistry, 26, 94, 102  
Physical properties, 2, 3, 6, 7, 21, 24, 25, 26, 29, 34, 56, 59, 63,

64, 65, 67, 68, 81, 94, 98, 102, 103, 106  
**Piezoelectric materials**, 34  
**Planetary atmospheres**, 80  
**Plankton**, 79  
**Plasma physics**, 80  
**Plastics**, 88, 103  
**Poisons**, 1, 11, 104, 105  
**Polar regions**, 13, 22, 35, 60  
**Pollutants**, 1, 32, 54, 104, 105  
**Polymers**, 103  
**Population research**, 61  
**Powder metallurgy**, 65  
**Power plants**, 57, 69  
**Precipitation (meteorology)**, 107  
**Prices**, 12  
**Primates**, 89  
**Product safety**, 63  
**Propellants**, 20  
**Propulsion systems**, 20  
**Psychological tests**, 51  
**Psychometrics**, 51, 72  
**Psychopathology**, 72  
**Psychopharmacology**, 72

**Q**

**Quadrupole moment**, 99  
**Quality control**, 65, 81

**R**

**Radiation dosage**, 108  
**Radiation effects**, 30, 32, 58, 83, 90, 91, 108  
**Radiation measurement**, 83, 91, 108  
**Radiation measuring instruments**, 30, 83, 108  
**Radiation protection**, 58  
**Radiation safety**, 4, 83, 91  
**Radiation shielding**, 83, 87, 91, 108  
**Radiation tolerance**, 58  
**Radioactive decay**, 78, 82, 99  
**Radioactive isotopes**, 18, 32, 53, 58, 91, 99  
**Radioactive wastes**, 32, 83  
**Radiobiology**, 32, 58, 66, 108  
**Radiochemistry**, 90

**Radioecology**, 32  
**Radiography**, 81  
**Radionuclide migration**, 107  
**Radiopharmaceuticals**, 18  
**Radiotherapy**, 66  
**Rare earth elements**, 92  
**Rayleigh scattering**, 108  
**Reaction kinetics**, 19  
**Reactors**, 4, 10, 78, 83, 87  
**Reading**, 46  
**Recreation**, 37, 107  
**Refractory materials**, 65, 94  
**Reliability**, 81, 82  
**Reliability (electronics)**, 93  
**Remote sensing**, 31, 74, 101  
**Resins**, 103  
**Resonance**, 3, 4, 5, 7, 27, 86  
**Resources conservation**, 12, 13, 69, 101  
**Rhenium**, 65  
**Rock mechanics**, 106  
**Rock properties**, 103, 106  
**Rocket propulsion**, 20  
 **Rocks**, 106  
**Rubber**, 103  
**Runoff**, 107  
**Rural education**, 47

**S**

**Safety engineering**, 55, 57  
**Salt domes**, 17  
**Scales (materials)**, 103  
**Schizophrenia**, 72  
**School administration**, 40, 41, 42, 44, 70  
**School integration**, 52  
**School law**, 40  
**Schools (structures)**, 40, 52  
**Science teaching**, 48  
**Sea water**, 28  
**Seismology**, 75  
**Semiarid lands**, 107  
**Semimetallic materials**, 3  
**Semiconductors (materials)**, 34, 94  
**Sexual behavior**, 72  
**Shock (mechanics)**, 95  
**Shock waves**, 30, 96  
**Silicides**, 65

**Slags**, 103  
**Sleep**, 9  
**Snow**, 22  
**Social discrimination**, 52  
**Social sciences education**, 49  
**Sociology**, 72  
**Solar activity**, 74, 75, 80  
**Solar energy**, 101  
**Solar physics**, 75, 80  
**Solid state physics**, 5, 92, 94  
**Spaceborne photography**, 31  
**Spacecraft**, 80  
**Spectra**, 4  
**Spectral lines**, 27  
**Spectrochemical analysis**, 5, 102  
**Spectroscopy**, 5, 26, 53, 94, 102  
**Speech**, 46  
**Steels**, 63, 65  
**Strategic materials**, 34  
**Streams**, 107  
**Stress analysis**, 4  
**Stress physiology**, 35  
**Stress psychology**, 35  
**Structural analysis**, 2, 4  
**Structural design**, 2  
**Subsurface current observations**, 79  
**Suicide**, 72, 97  
**Sulfides**, 65  
**Superconductors**, 3, 24, 34, 98  
**Superfluids**, 24  
**Surface finishing**, 64, 65  
**Surface tension**, 68  
**Surface waters**, 107  
**Survival**, 35  
**Synthetic drugs**, 84

**T**

**Tactical warfare**, 100  
**Tapping (threads)**, 63  
**Teacher education**, 38, 39, 41, 42, 45, 48, 50  
**Teacher recruitment**, 50  
**Teaching aids**, 41, 43, 48, 52  
**Teaching models**, 39  
**Teaching techniques**, 43  
**Technical education**, 37  
**Technology transfer**, 101  
**Telluric currents**, 75

AD-A082 470

NATIONAL REFERRAL CENTER WASHINGTON DC  
DIRECTORY OF FEDERALLY SUPPORTED INFORMATION ANALYSIS CENTERS, --ETC(U)  
1979

F/G 5/2

ML

UNCLASSIFIED

2 \* 2

A. A.  
A. A.



END  
DATE FILMED  
5-80  
DTIC

Thermal conductivity, 103  
Thermal environments, 81  
Thermionic emitters, 34  
Thermochemistry, 102  
Thermodynamic properties, 3, 21, 24, 33, 34, 76, 102, 103, 106  
Thermodynamics, 4, 33, 102  
Thermoelectric materials, 34  
Thermonuclear energy, 4, 23, 57  
Thermonuclear reactions, 66  
Thermophysical properties, 24, 34, 103, 106  
Tides, 75  
Titanium, 65  
Toxic marine organisms, 79  
Toxic materials, 1, 11, 32, 36, 54, 58, 83, 104, 105  
Toxicity, 11, 58, 92, 104, 105  
Toxicology, 1, 54, 104, 105  
Trace elements, 104  
Transition metals, 94  
Transition probabilities, 6  
Transport properties, 3, 24, 33, 68, 76  
Tropical regions, 35  
Tsunamis, 75

Tunneling (excavation), 106  
Turning (machining), 63

**U**

Ultrasonic tests, 81  
Underwater propulsion, 20  
Urban education, 52

**V**

Vanadium, 65  
Vegetable substances, 103  
Veterinary toxicology, 1  
Vibration, 95  
Violence, 72, 97  
Viscosity, 68  
Vital statistics, 71  
Vocational guidance, 37  
Volcanology, 75

**W**

Water chemistry, 107

**X**

X-ray spectra, 3  
X-rays, 108

**Y**

Yarns, 103

U.S. GOVERNMENT PRINTING OFFICE: 1980-306-251/6044